REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1911-12 to 1914-15

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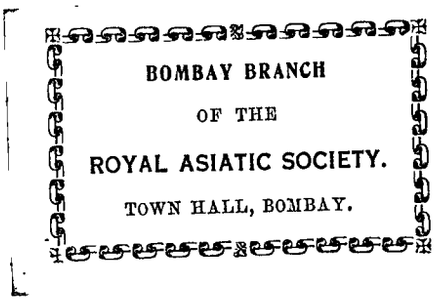

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ADMINISTRATION

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FOR

1911-1912.

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1911-1912.

PART I.
GENERAL SUMMARY.

[The "year" throughout this report is not invariably the financial year ending 31st March 1912. At the heading of each chapter a reference is given to the departmental reports which contain details of the subjects dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the "year" in Chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March, in Chapter II it is the revenue year ending 30th September 1911, and in Chapters III and VI it is the calendar year ending 31st December 1911.]

SCOPE OF THE REPORT.

Scope of the report.

1. The present report, besides being the usual annual administration report of the province for the year 1911-12, brings up to date, as a basis for future reference, the eleven "red letter" sections, which are only revised every ten years. These are the first seven sections of Chapter I; the first section of Chapters III, VI and IX; and the first and third sections of Chapter VII. The treatment of the subjects of these sections follows the lines adopted in previous similar reports, except that section 2—Historical Summary has been confined to the history of the provincial administration, and section 3—Form of Administration has been greatly expanded. The opportunity has also been taken to incorporate in the red letter sections standing information previously less appropriately included in the annual sections. Of this instances will be found in section 4, section 47 and section 59. In the annual sections notice has for the first time been taken of the conduct of the legal affairs of the Local Government (section 23-A), of the operations in the Punjab of the Army Remount Department, and the work of the Government Cattle Farm at Hissar (section 27). Unfortunately no information in the case of the Remount Department is available beyond March 31st, 1911. In Chapter V some detail is given of the working of the present system of provincial finance.

The separation of the city of Delhi and its environs from the Punjab and the constitution of the separate Delhi Administration did not take place until after the close of the year with which this report deals. In consequence, throughout the report Delhi is treated as included in the Punjab.

CHANGES IN THE ADMINISTRATION.

The Lieutenant-Governorship.

2. Sir Louis Dane, G.C.I.E., C.S.I., D.O.L., was Lieutenant-Governor of the province throughout the year, but was on leave from the 28th of April to the 5th of August 1911, during which period Sir James Douie, K.C.S.I., officiated.

Move to Delhi of the Government of India.

3. The announcement of the transfer of the seat of the Government of India from Calcutta to Delhi was made at the Coronation Durbar at Delhi on December 12th, 1911, and forms the most important administrative event of the year. The decision to separate Delhi from the Punjab was arrived at after the close of the year.

Changes in the decade.

4. Ten years ago the creation of the North-West Frontier Province, which was proclaimed on the 25th October 1901, left the Punjab with five Commissionerships and 27 districts, but it was already recognised that the creation of new districts was inevitable, and in 1904 the districts of Lyallpur and Attock were established, the former in the area colonized by the Lower Chenab Canal, and the latter to relieve the Ráwalpindi district, which had become unmanageable. Although the number of districts and divisions has not since been altered, important territorial changes have taken place and will be found noticed in paragraph 79 of the report. On the judicial side of the administration the civil and sessions divisions were increased by 4 to 16 in 1909, but the further proposal to introduce the system obtaining in other provinces of District and Sessions Judges has not yet been carried out. Other important administrative changes have been the abolition in 1910 of the Settlement and Excise Commissionerships and the appointment of the 2nd Financial Commissioner and of the Financial Secretary to Government. The appointment of a Registrar of Co-operative Societies and that of a Director of Agriculture and Industries separate from the Director of Land Records are changes necessitated by the rapid development of the province.

NATIVE STATES.

Population.

5. The population in 1911 of the 34 Native States subject to the political control of the Punjab Government was 4,212,794 and showed a larger decrease for the decade than the British districts of the province. This is, however, due to the fact that the more important of the States are situated in those portions of the Punjab in which plague has been most severe, and increases are shown in such States as had suffered from famine migration in 1901 or have not been severely visited by plague since that date. Whereas therefore the population of the Phulkián States, of Kapúrthala, and of Máler Kotla has declined, in the case of Nábha by as much as 16½ per cent., Baháwalpur, Mandi, Náhan, Chamba and the Hill States generally shew increases.

The Chiefs.

6. The principal Punjab Chiefs were invited to the Coronation Durbar at Delhi, and among other honours the Maharaja of Patiála received the honour of the G.C.I.E. and the Chiefs of Jínd, Nábha and Kapúrthala the hereditary title of Maharaja; the Maharaja of Kapúrthala also receiving the G.C.S.I. The aged Maharaja Sir Hira Singh of Nábha died on December 25th, 1911, Raja Bhawani Sen of Mandi on February 9th, 1912, and Raja Surindar Bikram Prakash of Náhan on July 4th, 1911. The deaths of the Raja of Nálagarh and of the Rana of Baghát also occurred in the year. In Mandi it was necessary to put a British officer in charge of the State pending

the selection of a successor to the Gaddi, but elsewhere the heir succeeded in due course. During the minority of the Chiefs the States of Baháwalpur and Faridkot are being administered by a Council of Regency in each case.

Principal vents.

7. In Baháwalpur the completion of the Sharkia Sadikia Inundation Canal has made a large area of the desert available for cultivation, and colonization operations have been taken in hand. A revenue settlement is in progress in Mandi under a British Settlement Officer who has also, as explained, been placed in charge of the State during the interregnum caused by the unexpected death of the late Raja. In Máler Kotla the settlement is being carried out by an officer of the Provincial Service who has been lent to the State. The town of Náhan is being provided with water-works, and in Chamba a hydro-electric scheme is being carried out.

Administration of the land.

Form of assessment.

8. Ten years ago attention was drawn to the increasing proportion of the land revenue demand, which, instead of being fixed for a period of years, fluctuates according to the area or character of the actual crops grown. In 1892 one-twentieth of the total demand was classed as fluctuating. Nine years later the proportion had risen to between one-eighth and one-ninth. At present one-quarter of the total Government demand is assessed under fluctuating systems, and whereas within the last ten years the fixed demand has fallen from £1,480,000 to £1,406,000, in spite of course of increases which have taken place in areas where fixity has been retained, the fluctuating demand has risen from £206,000 to £473,000. Much of this increase is due to the introduction of the fluctuating principle in the assessments on the Lower Chenab and Lower Jhelum Canals where, until canal irrigation has assumed definitely stable conditions, a fixed demand is out of the question. The fluctuating systems place much power in the hands of petty officials and entail increased work on revenue establishments and the exercise of unremitting supervision. The advantages of an assessment adjusted to the varying conditions of each harvest are, however, undeniable, and opinion is only divided as to the point at which they counterbalance the obvious disadvantages under which such systems must necessarily suffer.

Collections.

9. Re-assessments in Karnál, Delhi, Hissar and Gurgaon contributed to raise the fixed demand by £30,000 and the favourable conditions of the agricultural year 1910-11 permitted of the recovery of 99·3 per cent. of this demand. An additional sum of £31,000 or 2 per cent. of the annual demand was collected out of the arrears of previous years. The new year 1911-12 opened with a recoverable balance of about £26,000 only, a state of affairs more favourable than has existed for many years. Moreover, the amount of suspended revenue which was remitted during the year was no more than £5,000. Under fluctuating demands the assessments show an increase of £113,000, and the demand of the past year is the highest yet formulated. The re-assessment of the Lower Chenab colony has been the principal factor in this result. Practically no portion of the demand under fluctuating assessments remains uncollected.

Proprietors.

10. The system of land tenures in the province is described in section 4 of the report. At annexation Government found itself in possession of large area of waste land unburdened with rights, the development of which became from the first an object of the administration. Little

progress was possible, however, until the inauguration of the various canal colonies as much of the land was only culturable with the aid of canal irrigation. At the present day Government is the owner of about one-sixth of the area of the British districts of the province, or if the area on the books of the various departments including the Forest Department is deducted of about one-eighth, and about one-thirteenth of the total cultivated area is owned by Government. Much of this land is in the canal colonies in which the State is now gradually divesting itself of proprietary rights under the permission accorded to colonists generally to purchase the area of their grants.

Tenants.

11. There is practically speaking no tenancy question in the province and the tenancy and rent litigation is inconspicuous in volume. Much of the land is cultivated by the owners themselves and on more than two-thirds of the area cultivated by tenants-at-will the rent paid is a fixed share of the produce, thus adjusting the landlord's claim to the ability of the tenant to pay. In the vast majority of cases the landlord's share is made over to him when the crop is gathered, and it is only when the landlord neglects to attend at the division of the produce or the tenant makes away with the crop without division that resort to the courts becomes necessary. In point of fact the position of the tenant at present is a strong one owing to the demand for tenants on the new canals and for labour generally, and it is not without adequate reason that a landlord proceeds to eject a tenant whom he may find it difficult to replace.

Value of land.

12. The Land Alienation Act has now been in operation for 12 years and has amply fulfilled the objects of its originators. For the three years preceding the passing of the Act the area sold was thrice and the area mortgaged was more than twice what it is now : and yet the area redeemed in a year now falls little short of the area redeemed in 1899. The rise in the market price of agricultural land in the year before the passing of the Act had been striking, but the subsequent rise after a temporary set back has been no less remarkable. In the five years ending in 1901, the average price was Rs. 78 an acre, while in the last five years it has been Rs. 114 and last year Rs. 129 per acre. Land now sells at 123 times the land revenue which indicates that the purchaser expecting no more than a 5 per cent. return on his purchase money estimates the rent received from the tenant to be 7 times the land revenue instead of being equal to it as theory still demands. The causes must be sought in the extraordinary rise in the price of agricultural produce and the progressive leniency of the assessments. The restrictions of the Alienation Act do not of course apply to urban land. The introduction of a new line of railway has in many cases led to an immediate increase in the prosperity of individual towns, but practically everywhere the demand for land for factories and other commercial purposes, the influx of labourers and the desire and means to pay for better and better ventilated houses have led to an astonishing rise in the value of urban land, while the tendency of the successful business or professional man to migrate to the suburbs of the town has greatly increased the value of suburban land.

Professional surveys.

13. Owing to the great development of the province in late years, the work of the Survey Department in the Punjab had fallen into considerable arrears and two whole parties were employed during the year on bringing the survey up to date ; a third party was also engaged in surveying

parts of the Delhi and Gurgaon districts. Altogether work was in progress in thirteen of the districts of the province.

Settlement surveys.

14. For revenue survey work, however, the province is mainly independent of professional surveyors. The square system employed is explained in paragraph 158 of the report. All the plains districts of the province have now been surveyed on this system and the correction of the field maps which have been prepared is well within the capacity of the village patwari. The process by which the survey square originally adopted as a basis for measurement work has become a unit of tenure, not only in newly colonized villages, but in other canal-irrigated areas also, will be found in paragraph 159 of the report. *Killabandi* is now firmly established on the Lower Chenab and Lower Jhelum Canals, and greatly facilitates the record of areas, irrigated and cropped. Indeed more than any other cause this uniform field demarcation contributes to the smoothness of the working of the system of fluctuating assessments on these canals.

Riverain detachment.

15. As an exception to the general rule the Punjab riverain detachment of the Survey of India is wholly employed in assisting the Provincial Revenue Department. Originally constituted to assist the measures, now completed, for laying down fixed boundaries on rivers under Punjab Act I of 1899, the detachment is now employed in laying down base lines for the future demarcation and survey of the riverain village boundaries and for the general co-ordination of the cadastral surveys of the riverain estates. During the year the detachment has also been employed on the important work of laying down 25-acre rectangles in the Montgomery and Multan districts to form the basis of the colonization operations which will shortly be undertaken on the Lower Bari Doab Canal.

Settlement.

16. Nine settlements of the ordinary character were in progress during 1910-11, of which those in Ludhiána and Hissar districts were completed. The Ludhiána settlement was carried out with great rapidity and at commendably small expense by Mr. Dunnett. In Hissar a settlement of extreme difficulty was carried out with no less success by Mr. Townsend. The result of the efforts made in recent years to simplify settlement work and shorten the period taken over the operations is now becoming apparent, but still further improvements are being introduced in the direction of keeping record work more thoroughly up to date after settlement. The power recently devolved on the Local Government of sanctioning the undertaking of new settlements is calculated to ensure greater regularity in the number of settlements in progress to the great advantage of the establishment employed. In addition to the above regular settlements, re-assessment work was in progress in the Lower Chenab colony and in the colony and proprietary areas on the Lower Jhelum Canal in Shahpur district. In both cases the period for which the initial low assessments were sanctioned had expired and full assessments are over-due. The increase in the fluctuating demand following re-assessments in the Chenab colony is estimated at £110,000 per annum.

Colonies.

Development.

17. The wonderful achievement of extending perennial canal irrigation to the barren wastes of the Rechna and Jech Doabs forms a chapter in the administration of the Punjab which has no counterpart in any other province. The two main colonies which have been developed on the Lower Chenab and Lower Jhelum Canals have replaced a scanty aggregation of

pastoral nomads by a thriving and progressive population exceeding one-and-a-half millions. By the side of these great schemes the smaller colonies in Montgomery, Multán and Lahore, interesting as has been their development, seem insignificant. Colonization includes the selection of suitable cultivators from numerous villages in different parts of the province; the despatch of the selected colonists to the colony; the allocation of these immigrants in villages and in holdings, with due regard to considerations of tribe, caste, religion and family relationship; the demarcation of villages, holdings and fields; the reservation of grazing areas, the setting apart of village homesteads and the allotment of house sites therein; the selection of village officers; and the arrangements for securing the settlement of the village menials whose crafts and labour are indispensable to the agriculturists. For another class of non-agricultural population, the traders, shopkeepers, contractors and village bankers, provision has also to be made not only in the villages, but by founding towns at various centres thoroughout the colonies. Lyallpur, the head-quarters of the Chenab colony, has a population of over 19,000, and Gojra in the same colony of over 5,000; while in the sister colony the population of Sargodha approaches 9,000, and many other thriving towns have been established. At the present moment there is a lull in actual colonization operations in the province, though preparations are being made for a start on the Lower Bari Doab Canal in Montgomery and Multán, and on the Upper Chenab Canal in the Siálkot, Gujránwála and Montgomery districts. In the existing colonies the process of assimilating the conditions of the new settlements to those of the rest of the province is proceeding apace. The peasant colonists not bound by service conditions have recently been permitted to purchase on favourable terms the proprietary right in their holdings, and the privilege has already been exercised over a large area. With the completion of these purchases will disappear one of the chief peculiarities of the colony land tenures, the history of which is given in section 4 of the report. Although the colonies form an important portion of the area irrigated by the canals upon which they depend for their supplies of water and contribute very largely to the financial success of these irrigation works, the canals in each case irrigate old proprietary village land also. An account of the canal systems as a whole is given elsewhere. The Chenab colony has a total area of 3,828 square miles, of which 2,879 square miles have been allotted for cultivation, yielding some £170,000 per annum in land revenue alone. In this huge area it has been necessary to establish four new tahsils, three of which are included in the new district of Lyallpur. The Jhelum colony is a much smaller undertaking, and its continuity is broken by the existence in its midst of old estates. Even so the colony comprises an area of 900 square miles, with an allotted area of 616 square miles and a land revenue demand of some £38,000 per annum. Here the only administrative change has been the creation of one new tahsil, and the transfer of the head-quarters of the district from Shahpur to Sargodha has not yet been considered necessary. The establishment of the various agencies of Government, and of departmental, local and municipal administration has been no light task, and the provision of the necessary buildings and roads has been a severe strain on the finances of the province. The prosperity of the colonies however is an abiding fact, and now that the capital expenditure required for the existing colonies has been met, the whole province will increasingly derive from them the benefits secured by its sacrifices in the past.

Service grants.

18. The effects of the development of the colonies are felt in practically every department of the administration. For details the report must speak for itself, but attention may here be directed to the service grants by which Government has secured for itself certain public services as a condition of the grant. To many of the cavalry regiments of the Indian Army allotments have been made for stud farms which stand in a somewhat different category. Of the service grants proper the oldest are the village service grants to the village menials. The headman's grant is held with the appointment of village headman, and on the Chenab Canal is conditional on the breeding of mules fit for Army purposes. Small grants on tree-planting conditions have also been made. More important are the grants to camel-owners on special service conditions on the Lower Chenab Canal, and on the Lower Jhelum Canal the encouragement of horse-breeding is a principal feature of the allotments. Difficulties, especially in connection with questions of succession, arise in the service grants, and the impossibility of reserving grazing area for camels has led to a reconsideration of the question of camel service grants, but the benefit derived from the other service grants have been striking, and as long as they fulfil the objects with which they were introduced, there is no question of altering the conditions.

LEGISLATION.

Legislation.

19. Considerable activity was displayed during the year by the Legislative Council, and five Bills passed into law, of which the Punjab Municipal Act is of first class importance. The general changes introduced by this law are noticed in paragraph 124. An important development was embodied in Punjab Act II of 1912 which gives to the Local Government the power, previously vested in the Supreme Government, of sanctioning the undertaking of settlement operations. In addition the Bill to regulate the administration of the Punjab colonies and one to establish village civil tribunals were advanced towards their final stages, while a similar Bill to establish village criminal tribunals, which has since been withdrawn, also occupied the attention of the Council. The power of interpellation granted to the Council by the reconstitution of 1909 was freely exercised, and 46 questions were put and answered during the year. No resolution, however, was moved.

Among the Acts of the Imperial Legislature those more particularly affecting the province are the Criminal Tribes Act, the Indian Factories Act, the Co-operative Societies Act, the Provident Insurance Societies Act and the Indian Life Assurance Companies Act.

POLICE.

Crime.

20. The police returns for the year indicate a considerable increase in the number of serious offences against the person and property. Murders, dakaities and robberies have been somewhat alarmingly frequent, and the province is at present suffering from one of the waves of violent crime, which from time to time sweep over the country. In particular the successful operations of frontier gangs, which penetrate far into the province, find willing imitators among the turbulent tribes of the north of the province. The success of the investigating force on the other hand diminishes as crime increases, and, although the number of true cases has increased by some 50 per

cent. in the decade, the number successfully dealt with has remained practically stationary. The statistics shew that only half of the true cases reported under the more important classes of crime are brought to trial and a conviction is obtained in one-third only of the true cases.

Present conditions.

21. For these results the reforms introduced on the recommendation of the Police Commission are to some extent responsible. No one, however, can regret the eradication of discreditable methods of working which, though acting as a deterrent, necessarily lowered the self-respect of the force and alienated public opinion. So far too as want of success is due to the inexperience of the new class of upper subordinate now recruited, the cause is of a temporary nature. Without the co-operation of the general public, however, the single-handed efforts of the police are bound to be largely infructuous. Education and material development are proving rapid solvents of communal responsibility, but progress has not yet advanced to the stage at which the individual recognises that, though his immediate interests lie in shielding the offender, it pays in the long run to throw his weight on the side of law and order. The valuable protection to society which the security sections of the criminal law afford, for instance, are rendered nugatory by the difficulty of getting respectable evidence against known bad characters. To the development of such a feeling the vernacular press can very materially contribute.

The courts.

22. The working of the police in their efforts to deal with crime is largely dependent on the assistance given by the courts. The speedy disposal of cases is the direction in which this assistance is most efficacious, and delays inevitably end in a reduction in the proportion of convictions,—a result of which the causes are obvious. Much of the time of the police is taken up by the investigation of cases upon Magistrate's orders, which is felt to be a hardship as the investigations are almost invariably useless. If too the courts have set up an almost impossible standard of evidence, as is sometimes asserted, much honest effort is wasted, the police force is unnecessarily brought into contempt, and the protection which society is entitled to expect is diminished.

The Durbar.

23. That the provincial police force is in one respect highly efficient was proved by the admirable services rendered on the occasion of the Coronation Durbar. The handling of the traffic and control of the vast concourse that assembled at Delhi won high admiration. The readily admitted success of the Punjab Police in the difficult task entrusted to it cannot but have the best effect on the morale of the force.

Criminal Justice.

Cases.

24. From what has been said above an increase in the number of criminal cases brought to trial needs no explanation. The figures returned are indeed the highest yet recorded, and, though petty cases of assault, mischief and the like contribute to swell the returns, the increase in serious cases is considerable. The number of offences relating to marriage is always a feature of the criminal justice returns of the province. The class of cases is one with which the courts are seldom able to deal successfully. Much of the present serious crime indeed is due to the falling-off in the number of women, which is a marked feature of the recent census. The increasing absence of ceremony multiplies the difficulties of the courts, and the need for registration or other tangible proof of the contract of matrimony is urgent.

Results.

25. Under a new system of recording the results of original criminal trials introduced during the year, it is calculated that slightly over two-thirds of the cases brought to trial are convicted or compounded. By the police returns, in which of course compositions rarely figure, the proportion is practically the same. Much of the time of the courts is taken up with cases which should be summarily dismissed, and the number of compounded cases in each district varies inversely with the number summarily dismissed. Insufficient use too is made of the power to order compensation to be paid to the accused in false complaints, the number of which is increasing. In appellate courts about half the appeals and two-thirds of the revisions are rejected. The statistics of the criminal administration show that the percentage of sentences of all kinds reversed in the Punjab is not higher than elsewhere, while the jail report discloses that a far higher percentage of prisoners are released on appeal than is the case in other provinces. The discrepancy will no doubt be explained next year. In the Chief Court a higher percentage of revisions were rejected, but a lower proportion of appeals; while death sentences in a year in which murders were unusually numerous were unusually few. Indeed, on the figures reported the culprit in a reported true case of murder has a six to one chance against suffering the extreme penalty of the law.

Prisons.

The jails.

26. Although the number of convict admissions was not abnormal, the admissions of under-trial prisoners were much in excess of those of the previous year, and the daily average jail population was also considerably higher, though the release of 1,710 convicts on December 12th in connection with the Coronation Durbar, temporarily relieved the pressure. The health of the prisoners was not all that could be desired, and some anxiety is felt concerning the spread of tubercle. Discipline continues to be well maintained under the policy of considerate treatment insisted on by the authorities. The development of jail industries, consequent on the requirements of the various departments which have, under orders issued a few years ago, to be obtained where possible from the jails, is from the point of view of the latter exceedingly satisfactory, and the earnings in the year per head of the prisoners sentenced to labour constitute a further record. The earthwork done for the Canal Department on the Lower Bari Doab Canal is noticed in paragraph 491 of the report and redounds greatly to the credit of the jail administration.

Policy.

27. The policy of concentrating prisoners in the larger jails of the province, which has been pursued for some years, is now nearly complete, and the smaller district jails have been reduced to the status of subsidiary jails which are collecting and forwarding institutions. A great gain of efficiency has been obtained by the change, and it is claimed that there is also a considerable reduction in cost, but in periods when, as at present, the jail accommodation is strained to the utmost, the extra cost of exchanging prisoners must largely reduce the saving obtained from collecting them in the larger institutions. The establishment of a Borstal Jail at Lahore, the preparations for which were nearly completed during the year, is a notable advance which will be watched with interest. A welcome experiment in the reclamation of criminals is being tried in the arrangements noticed in paragraph 331, under which juvenile

adults from this jail will be permitted to spend part of their sentence in the Salvation Army Danepur Settlement at Lahore.

Civil Justice.

Suits.

28. The Punjab need no longer plead guilty to the charge that it is relatively to the total population the most litigious province in India, though even so the total number of suits instituted per thousand of the population is double that returned by the neighbouring United Provinces. In suits to establish a right of pre-emption and in matrimonial suits the Punjab has the unenviable distinction of returning a greater actual number of cases than any other province. A decrease in the number of total institutions again returned this year may be due to many causes, and it still remains to be seen if the decrease is of permanent character. Matrimonial suits, though still far too numerous, are decreasing in numbers and the frequent absence of any form of ceremony causes much difficulty to the civil as well as to the criminal courts. Judicial opinion is strongly in favour of the abolition of the right of pre-emption. The opposition to such abolition, however, though it would cut down litigation with a bound, is very strong, and at present nothing further is contemplated than the removal of the anomalies of the present law.

Administration.

29. An improvement in the administration of civil justice is anticipated from the proposed entertainment of District and Sessions Judges, in place of the present system of Divisional and Sessions Judges explained in paragraph 94 of the report. The new scheme which has been accepted by the Local Government still awaits sanction by the Government of India. In the Chief Court successive restrictions of the right of appeal have as yet had little effect in relieving the congestion of work which is approaching the conditions which necessitated the temporary appointment in 1905 of four extra Judges. In addition to the permanent court of five Judges, two additional Judges have been employed for some time past. It is hoped, however, that recent amendments with the object of placing the law of appeal on the same footing as elsewhere may reduce materially the civil appellate work of the court.

Registration.

Registration.

30. A decrease in the number of compulsory registrations of titles has continued in the present year. The decrease is nearly all under the head of mortgages for which the present prosperity of the agricultural population might be thought sufficient reason, but the failure of the kharif harvest is given as the principal cause of the decline as checking redemption and mortgages for enhanced consideration. There is no doubt that the growing confidence in the mutation proceedings of the Land Records Department tends to reduce the resort to written deeds and this tendency is more particularly noticeable in the case of optional registration. The last word on the subject of the registration of titles in agricultural land in the Punjab has not yet been spoken.

Local Self-Government.

District Boards.

31. The year has been uneventful as far as district boards are concerned, though progress is recorded under Education, Medical, Veterinary, Arboriculture and village sanitation. The boards are hampered by the lack of funds not earmarked for specific expenditure, and few openings for originality are afforded. As yet the leading men in the rural communities prefer

nomination to election, and for the present the nominated element on district boards must remain considerable. The system of delegating powers to sub-committees and members is being extended with good results, and there is a growing tendency for the boards to take up general questions dealing with the prosperity of the district. In Lyallpur, for example, temperance reform and the restriction of expenditure on social ceremonies have engaged the attention of the district board. It is generally accepted that, owing to the small average size of districts, the district board is the smallest unit which can usefully be constituted with independent financial powers. For this reason the old local boards for tahsils were generally unsuccessful and have been gradually abolished. The proper line of devolution is therefore the formation of local sub-committees and not of separate sub-district boards.

Municipalities.

32. The new Punjab Municipal Act came into force on October 1st, 1911. Under it certain defects of the old Act have been remedied and the powers of the committees have been extended in useful directions. There are now 107 municipalities, and a simple system of administration is in force in 104 notified areas. It cannot be said that much public interest is taken as yet in municipal administration, and elections generally are marked by indifference. A sectional system of representation in force in one or two cases has not yet got beyond the experimental stage. The working of the municipalities is reported to be satisfactory generally, and many members take a proper interest in their municipal duties. Efficiency is only secured as a general rule by official guidance. It is under consideration, however, whether local non-official Presidents cannot be substituted in cases where the President at present is a non-resident official. Little progress has been made in substituting other forms of taxation for octroi which is in force in 102 municipalities. It is the least unpopular form of taxation though it is open to various forms of abuse. House-taxes are distinctly unpopular, but some of the adverse feeling may be due to the arbitrary manner of the assessments. An improved form of house-tax is being tried in the Siálkot district, and the result will be watched with interest. The results of the conservancy tax, in Simla, which last year was substituted for the former servants' tax, have not come up to expectations, but the greater control obtained over the floating population of Simla may compensate for this by greater efficiency in sanitation and administration.

Agriculture.

Scientific.

33. In the organization of the provincial department of agriculture a step forward has been taken in the scientific investigation of the condition of the principal industry of the province. Wheat, cotton and sugarcane naturally occupy the chief attention of the experts and demonstrations of the results achieved are now being arranged. The protection of cotton from boll-worm and sugarcane from moth-borer is of the greatest improtance to the farmer. The introduction of Arabian dates and reclamation of alkaline soils are other directions on which the energies of the department are engaged. Some progress too has been made with well-boring and in the production and distribution of labour-saving machinery. The department, however, suffers at present from the lack of a qualified Agricultural Engineer.

Co-operative societies.

34. In no direction has progress been more striking than in the development of co-operative societies which at the present day number 1,743, with a capital of Rs. 57½ lakhs. A description of the Punjab type of society will

be found in paragraph 103 of the report. So far the societies have been almost exclusively rural in type, but urban societies are now being encouraged, especially among weavers. The difficulties are much greater than in the case of agriculturists' societies, but do not appear to be unsurmountable. The recent development of central banks and of unions of societies is described in section 27 of the report.

Veterinary and live-stock.

35. The Punjab has every reason to be proud of its Civil Veterinary Department, the progress of which has been rapid since its reorganisation in 1901. By the establishment of a veterinary hospital at each tahsil in charge of a Veterinary Assistant and the appointment of a touring Veterinary Assistant in each district and of an Inspector for every two districts the scheme as originally put forward has been worked up to. The success achieved and the popularity of the relief afforded is strong encouragement for a fresh advance. Much information on the important stock-breeding industry has been published in Mr. Stow's Report on Cattle and Dairy Farming which will be valuable in guiding future developments. The past year has been as exceptionally healthy for live-stock as for human beings, and a greatly reduced mortality is reported. Eight horse shows and 34 cattle fairs are held under the auspices of the Department. The cattle fairs held in Hissar and Rohtak and at Amritsar are of great importance as markets, but as shows it is doubtful if any of the cattle fairs are successful.

Hissar Farm.

36. With the abolition of the Imperial Civil Veterinary Department the control of the Government Cattle Farm passed to the Provincial Government on April 1st, 1912, and the operations are for the first time now included in this report. The improvement of the important Hissar breed of cattle is the chief object of the farm, and a much appreciated type is now being produced. The farm does not bring in any large profit but even a small loss would be more than compensated for by the improvement in the cattle of the province brought about by the bulls issued from the farm. Donkey breeding has recently been started to supply jacks required by Government or the district boards for mule-breeding. The farm also supplies siege train bullocks and mules for military requirements. The interesting experiment is being tried of improving the fleece of country sheep by the introduction of the merino strain, and the results so far are distinctly encouraging.

Weather and Crops.

Harvests of the year.

37. Sowings for the autumn harvest of 1911 were greatly contracted by the dryness of April and May, and the subsequent failure of the rains led to extensive failure on all areas unassisted by artificial irrigation. The sown area was only 64 per cent. of the normal, and of this no less than 31 per cent. failed. Heavy rains in September, October and November, however, created very favourable conditions for the sowings for the spring harvest of 1912, and in fact the sown area was 13 per cent. above normal. Untimely drought in February and March dashed the hopes entertained of a record harvest, but even so the result was a good 18-anna crop. The year was one in which the economic importance of the canal system became very prominent. Except in the hills and a few submontane tracts there was no unirrigated autumn harvest and in the spring harvest the drought in the late winter again compelled resort to artificial irrigation. As usual the strain was well met by the Government canals which provide two-thirds of the arti-

ficial irrigation, though the inundation canals in particular had to contend with low supplies in the rivers.

Cultivated area.

38. The cultivated area of the province, which amounted 10 years ago to some 26¼ million acres, has increased in the decade by 8 per cent. and now stands at little short of 28½ million acres, and in the same period the irrigated area has increased by as much as 14 per cent. The area of crops sown varies greatly from year to year, and the variation is even greater of course in the case of matured crops. In the two harvests of 1911-12 the sown area aggregated 26¼ million acres whereas a matured crop was, owing to the extensive failure of the autumn harvest, obtained on 21½ million acres only. Of this average the total irrigated area was over 11 million acres.

Prices.

39. The diagram attached to the report indicates the course of prices in the Punjab of the main articles produced and consumed in the province. Prices are no longer dependent on the local agricultural conditions, and in the case of the main articles of export are adjusted to the conditions of supply and demand in the world's markets. Thus in the past year, in spite of the heavy crop, the harvest prices of wheat were even higher than in the previous year owing to the brisk demand for export. The high level to which prices have risen is a factor of great economic importance, but, in a province like the Punjab where the great majority are producers first and consumers afterwards, has contributed not a little to the general prosperity.

Forests.

Forests.

40. About 9 per cent. of the area of the British districts of the province is borne on the books of the Forest Department. In addition some 360 square miles of forests in the State of Bashahr in the Simla Hills have been taken on lease by the department. The most important forests are those in the hills, chiefly in Kángra, including Kulu, and Bashahr, but the greatest area is situated in the plains, more especially in the Multán district. The greater portion of the area of the so-called forests in the plains is sparsely covered brushwood jungle, in which the application of the Forest Act safeguards the title of Government against the time when the land will be required for colonization. Large areas have already been surrendered for the Lower Chenab and Lower Jhelum Canal colonization schemes and the development of the Lower Bari Doab Canal will require the surrender of further areas in Montgomery and Multán. In place of these unproductive areas, schemes are being worked out for the establishment of irrigated plantations on the canals of the Triple-Project on the lines of the one which has proved highly successful at Changa Manga on the Upper Bari Doab Canal in Lahore district. The Forest Department has no monopoly of the market either for timber or for fuel. The supply of timber from the forests of Kashmír and the Punjab Hill States far exceeds that of the Government forests and prices are dependent on conditions beyond the control of the provincial officers. Over-stocked markets have adversely affected the working of the department which in the past year was only fairly successful from the financial point of view. Great administrative difficulties are encountered in the Kángra district in adjusting the requirements of the surrounding population to the paramount necessity of preserving the forests which are gradually deteriorating. That the interests of the population, among which the forests lie, are not neglected, is shown by the fact that right-holders and free-

grantees removed from the forests 1,283,441 cubic feet of timber and 12,642,731 cubic feet of firewood, as well as minor produce to the value of £135,000. The resin factory established at Shahdara has been highly satisfactory and a larger plant will shortly be installed.

TRADE AND MANUFACTURES.

Trade.

41. Ten years ago the value of the trade of the Province during the year was 20½ millions sterling, shared almost equally between imports and exports, and in both cases constituted for the time being a record. During 1911-12 the value has risen to 38½ millions sterling, and though imports of 20 millions in value are the highest yet recorded, the exports of the year were below the figure of over 19 millions returned in 1907-08. In addition the net import of treasure amounted to £1,622 000. The chief imported articles are foreign cotton piece-goods forming 22 per cent. of the whole, Indian cotton piece-goods 8½ per cent., sugar 12 per cent., and metals 11 per cent. The chief items of export are grain and pulse 53½ per cent., cotton 15 per cent., and oil-seeds 10 per cent. These figures for the trade of the province provide convincing testimony of the existing prosperity of the Punjab. Under treasure the net imports of gold (coin and bullion) were £637,000 and of silver bullion £1,476,000, but silver coin was exported to the nett amount of £491,000. The absorption of silver bullion is no new feature of the Provincial returns, but the substitution of gold for silver coin in the circulation and, it may be surmised, in the hoards of the province is a movement of recent growth.

Industries.

42. The principal mining industry is the salt mining of the Salt Range which is conducted by the State itself. The Punjab coal mines are insignificant, and the total output scarcely exceeds 30,000 tons a year. Now that the principal mines have been handed over by the North-Western Railway to private enterprise, an increase in the output may be anticipated. The undeveloped condition of the mineral wealth of the province greatly reduces the scope for industrial enterprise, while the scarcity of local coal mines and the expense of fuel will always handicap manufactures. A further obstacle is the scarcity of labour much accentuated by the ravages of plague and malaria and the demand for field labour in the canal colonies. The most profitable industries or those requiring little labour have alone any chance of success. Capital, though scarce, is forthcoming to prosecute an industry that has been found to be profitable, and in fact cotton-ginning factories have outstepped the average supply of the raw material. Out of 268 factories dealt with under the Act no less than 202 are cotton-ginning, cleaning and pressing factories, but 59 ginning factories were not at work during the year for want of raw material. In addition to the above, 15 flour mills, 10 foundries, 8 cotton spinning and weaving mills, 3 sugar factories, 2 biscuit mills, and 1 woollen mill practically exhaust the list of large industries of the province. The list is still small, but a beginning has been made.

Joint stock companies.

43. Joint-stock enterprise has made a notable advance in late years, and the number of companies has risen from 51 in 1901-02 to 194 in 1911-12, and the paid-up capital from a little over half a million sterling to rather more than 1¼ millions. The character of many of these concerns, however, is such as to give rise to misgivings. Commercial confidence has at most a precarious existence still and in the doubtful nature of many of the companies lies the possibility of a considerable set-back in the development of a credit system.

Public Works.

General conditions.

44. The expenditure of the Buildings and Roads Branch of the Public Works Department reflects the general state of the provincial finances, as it is the first to suffer retrenchment when funds are scanty. The annual expenditure on establishment £50,000 and on repairs £10,000 admits of little reduction, but the outlay on new works fluctuates greatly from year to year. In 1908-09 the expenditure on new works fell to £105,000 and was hardly greater in the following year. During 1911-12, however, funds were once more plentiful and £193,000 were spent on original works, two-thirds of which went on civil buildings. The urgent requirements of the province in this direction are, however, very far from being met, though increased expenditure in the Jail, Police and Education Departments has relieved the most pressing necessity. The provision of works required by the normal development of the province has been greatly hampered by the extraordinary demands occasioned by the formation in the decade of three new districts and by the restoration of the losses caused by the earthquake in Kángra and the Indus at Dera Gházi Khan. Nor has the increased annual revenue from the canal colonies sufficed in the past to meet the demand for roads and buildings necessitated by the introduction of the machinery of administration in these hitherto desert areas. Most of these special demands have now been met, and, though the colonization operations shortly to be undertaken on the Lower Bari Doab will necessitate large expenditure on buildings, more attention can undoubtedly be paid to more normal requirements in future than has been possible in the last decade.

Buildings and Roads.

45. The more important works under construction in 1911-12 were the King Edward Memorial Buildings at Lahore and the Simla Hydro-Electric Scheme. Work on the former, which is expected to cost in all some £230,000, has been started, and the latter is now all but complete.

With the extension of railways the comparative importance of the roads other than feeder roads of the province gradually sinks, but the Department is responsible for some 1,100 miles of metalled and 700 miles of unmetalled road. £72,000 was spent on the maintenance of existing roads and £14,000 on new work. Most of the minor and feeder roads have been made over now to the District Boards with a grant to cover the cost of maintenance. This has been done with a view of encouraging Local Self-Government and in order to enable the District Boards to maintain better professional establishments.

Other activities.

46. Although principally concerned with works carried out at the charge of the Provincial Government, the Department undertakes work for the Imperial Government and for local bodies or private associations. During 1911-12 the expenditure incurred on such work was £45,000 and £16,000, respectively, out of the total expenditure of the Department of £408,000.

Railways.

Railways.

47. There are now 4,043 miles of railway line in operation in the Punjab inclusive of 141 miles opened during the past year. No serious accident occurred in 1911. The Jakhal-Hissar and Jullundur-Hoshiarpur branches of the North-Western Railway and the Jullundur Doab lines of the Southern Punjab Railway are under construction and now nearing completion. The returns of the main administration, the North-Western Railway, which

operates 4,880 miles of line both for the State and private companies in the Punjab, Sind and Balúchistán, show net earnings of practically 4½ per cent. on a capital outlay of £54½ millions sterling. The mileage includes the strategical railways on the frontier which yield little or no profit. The expenditure out of revenue on improvements has been very large of recent years, and it is probable that the real return upon the Punjab lines proper is well over 8 per cent. This administration was entrusted with the responsible task of organising the special arrangements required for the Delhi Durbar, and achieved a signal success.

The Punjab is now covered with a net work of lines of railway on the standard gauge admirably designed for the speedy and economical disposal of the surplus food products of the province upon which its prosperity so much depends. The traffic with its principal outlet to the sea at Karáchi can be rapidly handled since the completion of the second line of rail down the Indus to that port. In the provision of the less important feeder lines, however, much remains to be done to bring up the internal communications to a satisfactory standard. The construction of such lines is more the province of private enterprise, and the development of this agency is very desirable.

Irrigation.

Major Productive Works.

48. Eight canals in the province are classified as Major Productive Works, that is to say, they are expected to yield within ten years of their completion sufficient revenue to pay their working expenses and the interest on the outlay expended on their construction. These works are the Western Jumna, the Sirhind, the Upper Bari Doab, the Lower Chenab, the Lower Jhelum, the Sidhnai, the Upper Sutlej (Inundation) and the Indus (Inundation) Canals. The total cost of their construction now amounts to £7¾ millions sterling, and upon the capital outlay a profit of 16·13 per cent. was obtained in 1911-12, out of which an interest charge of slightly over a quarter of a million had to be met, resulting in a net profit after paying interest of little less than a million sterling. The whole of the canals have fulfilled the conditions of the class in which they are placed, even the Indus Canals, the weakest of the eight systems, having returned this year a surplus after payment of interest charges. The most remunerative canal of the province is still the diminutive Sidhnai Canal in Multán district, the profit on which amounted during 1911-12 to no less than 37·81 per cent., as the work was very cheaply constructed though it has stood well, but the Lower Chenab Canal also shows the magnificent profit of 36·06 per cent. This latter undertaking, upon which over £2 millions sterling has now been expended in capital outlay, returned a profit of £685,000 after payment of interest charges, and it is noted that the accumulated nett profits now exceed the cost by £2,460,000.

Minor Protective Works.

49. In addition to the above, five Imperial Works in the province are classed as Protective, of which three—the Lower Sutlej, the Chenab and the Muzaffargarh Inundation systems—only differ from those in the former class in that all expenditure is met from revenue, capital accounts not being kept. All three canals have more than paid their way and, inclusive of a small loss incurred on the insignificant Shahpur and Ghaggar Canals systems, the minor Imperial canals of the province return a profit of over £40,000.

Character of year.

50. The year has indeed been a favourable one for canal irrigation. The failure of the monsoon led to a keen demand for canal water both in the kharif and rabi harvests. The perennial canals were able to meet the demand and so reaped fully the advantage offered. On the inundation canals as a whole the river supplies were low, and moderate areas received irrigation. Taken altogether the canals in charge of departmental officers irrigated an area of 8,331,892 acres, which is compared with the average of 7,222,375 acres of the preceding three years. The result is eminently satisfactory. Among individual results the Sirhind Canal irrigated 1,609,458 acres against an average of 857,706 acres, and the Western Jumna Canal 775,450 acres against 593,615 acres. Both canals are in the east of the province, and the demand for canal water on these canals, unlike conditions elsewhere, fluctuates violently according to the rainfall, as in favourable years the cultivator is to a large extent independent of canal water.

Protective nature of the canals.

51. Although the larger canal systems of the province are classed as "productive," the very fluctuations above referred to, no less than the fact that one-third of the sown area of the province is canal-irrigated, show how essentially protective these canal systems really are. The protection is moreover not confined to the localities where canal irrigation is afforded. The overflow of the congested districts has poured into the colonized areas of the west, and the wealth earned in the colonies is widely distributed over the province. In years of scanty rainfall, such as the past, the stricken agriculturist of the unprotected areas finds a ready welcome and employment on the canal-irrigated fields; while local scarcity of fodder is remedied by train loads of *bhusa* despatched at concession rates from the abundance of the colonies. Though there are insecure areas in the east of the province to which canal irrigation can yet with advantage be afforded, it is unlikely that famine relief will be required in the future on anything like the scale of the past.

The Triple Project.

52. The immense scheme having for its object the irrigation of the high plains of the Lower Bari Doab by bringing the surplus water of the Jhelum and Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass is now nearing completion, and in fact the Upper Chenab Canal, which was opened by His Excellency Lord Hardinge on the 12th April 1912, has now begun irrigation. By the close of the year capital to the extent of £4¼ millions sterling had been expended out of the revised estimate of £6¾ millions. It is now expected that irrigation will be afforded on the Lower Bari Doab in kharif 1913, and that the Upper Jhelum Canal, the most northerly of the series, will be opened by October 1914. Novel and difficult problems of canal construction have been presented to the engineers on all these canals. An interesting feature is the level crossing of the Ravi at the head of the Lower Bari Doab Canal, where it was desired to pass on the supply from the Upper Chenab Canal, supplemented by any cold weather supply in the river, but at the same time to discharge down the river its monsoon floods. Since the close of the year the river floods have been successfully passed over the level crossing which was completed in the previous cold weather. The greatest difficulties have been met with in dealing with the headworks and with the torrent works required on the Upper Jhelum Canal, and there

have been delays. Night and day shifts have now been introduced on the headworks, and the end is now in sight. Although the present estimate for the project is well in advance of the original estimate of £5¼ millions, no fears are entertained as to the " productiveness " of the undertaking.

Revenue and Finance.

Gross revenue and expenditure.

53. The revenue raised in the Punjab during the year amounted to some £5,359,000. This includes revenue of the Canal, Salt and Opium Departments, but not the receipts of the Railways, Telegraph and Post Office, nor funds raised by municipalities and district boards. The total is made up of the following items :—Land revenue £2,319,000, Irrigation (direct receipts) £1,474,000, Salt £254,000, Opium £42,000, other Civil Departments £1,270,000. Expenditure, omitting that of the three latter departments, the municipalities and district boards and also military expenditure, amounted to some £3,421,000. The contribution of the province therefore to Imperial needs, which include defence, home charges and interest on loans, was a little under 2 millions sterling.

The revenue of the year shows an increase of £483,000 over the figures of the previous year, of which land revenue alone contributes £334,000. The general increase in the prosperity of the country has, of course, affected the land revenue receipts as well as those from the other main sources of income, all of which show increases. Owing, however, to the general system of fixed assessments the increase under land revenue is very gradual. The chief cause of the high figures now reported is the income from the sale of proprietary rights in land allotted in the colonies, which is of the nature of capital.

Land revenue.

54. The land revenue head in the accounts includes not only the ordinary demand which may be regarded as the State's customary share of the produce of the land, but also income received from the sale of Government rights in land and other receipts, generally of a petty nature, connected with the administration of the land. Thus out of the income of £2,319,000 under land revenue some £464,000 were derived from these other sources and principally from sales of proprietary rights in the colonies. The actual ordinary demand is thus rather less than 2 millions sterling. Even this demand includes the income derived from State-owned lands, still considerable, though dwindling with the alienation of proprietary rights. This though assessed as land revenue is in principle profits derived from the public estate and not ordinary land revenue, though in practice the difference is hardly appreciable. It also includes land revenue "due to irrigation" explained in the next paragraph which is essentially irrigation revenue, though collected for administrative convenience as land revenue. The ordinary demand is subject to violent fluctuations, for not only is the demand where fixed freely suspended in bad seasons and collected on the return of normal conditions, but one-quarter of the whole is now assessed as a fluctuating demand depending on the result of the half-yearly ascertainment of the harvested area and thus directly on the vicissitudes of the seasons.

Irrigation.

55. The direct income obtained from the Government canals of the province amounts to £1,474,000 and the expenditure to £984,000, giving a nett surplus of £490,000. The manner in which this surplus is shared between the

Provincial and Supreme Governments is explained in paragraph 498 of the report. As yet the Provincial share has not reached the minimum guaranteed by the Supreme Government, which in the past year contributed £21,200 as the balance necessary to make up the minimum. The opening of the new canals of the Triple Project, however, will very shortly remove the necessity for this annual contribution. The surplus here shown, handsome though it be, is not the only financial benefit derived by the State from the canals of the province, for much of the revenue which for administrative reasons it is convenient to assess and collect in the form of land revenue would be non-existent but for the canals. It is not in the nature of the case possible to calculate with mathematical accuracy the actual amount of this land revenue "due to irrigation," nor the deduction which has to be made therefrom for the increased cost of administration necessitated by the extension of canal irrigation, but care is taken to obtain some approximation, with the result that for the past year a nett sum of £446,000 was found to have been collected as land revenue due to the existence of the canals. Of this £388,000, due to the canals classed as major works, is shown in the Provincial accounts under the irrigation head. The amount of land revenue due to irrigation is rapidly rising with the imposition of full rates on the Lower Chenab and Lower Jhelum Canals. As it is, the nett annual income, both direct and indirect, obtained from the irrigation works of the province is close upon one million sterling.

Excise.

56. The gross revenue of the Excise Department now amounts to over £424,000 and has increased by 142 per cent. in the decade. This astonishing increase has been caused in some measure by increased consumption due to the immense increase in the wealth of the province and especially of the agricultural classes. This, however, has also permitted of increased duties, while the strengthening of the preventive service has done something to keep down illicit practices. Since 1906 the excise administration has been engaged in carrying out the reforms advocated by the Excise Committee. Alcoholism and drug habits, however, depend upon conditions of religion and caste and to some extent of occupation rather than on changes and development of excise policy. It is easy to exaggerate the amount of intemperance in the province, but its existence in deplorable degree in certain communities will be admitted. While Government can do something to raise the cost of liquor and check illicit distillation and the unrestricted sale of drink, true temperance reform must come from the people themselves, and it lies upon the leaders of the particular communities which are most in need of such reform to awaken the communal conscience to a sense of duty.

Of the total income seven-tenths are derived from liquors, one-tenth from drugs and two-tenths from opium. The greatest income has been derived from liquors. There appears to be a slight tendency to substitute malt liquor for the ordinary cane spirit, and the tendency is one to encourage, though for the present it is confined to large cities and cantonments. A new feature of the liquor trade is the sale of "spiced" spirit, which is ordinary country spirit coloured and bottled. It is doubtful at present if this is displacing foreign spirit or the plain country article, but it seems improbable that the consumer is defrauded or the foreign spirit vendor injured by the sale of country spirit in this guise. The taxation of all kinds of opium has been increased during the year without resulting

in any reduction of consumption, though excise opium has increased in popularity at the expense of other descriptions. A large increase in the duty on charas has been followed by a considerable reduction in the consumption of this pernicious drug.

Salt.

57. The Salt Department is not under Provincial control. Its operations are practically confined to the mines in the Salt Range, though two small mines are worked in Mandi State and salt is obtained by evaporation from well brine in Gurgaon district. The nett profit to Government from the department in the Punjab is some £222,000. The average supply of salt per head of population works out to about 9lbs. per annum, and reckoning the duty at 1*s.* 4*d.* per maund of 82lbs. the salt tax falls at about 2¼*d.* per person per annum. As much of this is paid by graziers, it would be difficult to find a less onerous tax: and its indirect incidence renders it acceptable in a country in which direct taxation is generally open to strong objection.

Stamps.

58. The receipts from the sale of court-fee and non-judicial stamps grow steadily, and in the case of the latter can be regarded with satisfaction as being in the main attributable to commercial prosperity. In so far as the increase in the sales of court-fee stamps is due to increase in litigation, the result is one which must be regarded with regret in a province in which litigiousness is so widespread as in the Punjab. The net income from stamps aggregates £334,000 and the cost of administration is no more than 3½ per cent. of the total receipts less refunds. The gross receipts have increased by more than 37 per cent. in the decade.

Income-tax.

59. The receipts from income-tax do not increase in proportion to the general increase in the material prosperity of the province, and gross receipts are only 13 per cent. in advance of those of ten years ago. In the meantime of course incomes of less than Rs. 1,000 per annum which previously paid somewhat less than one-fourth of the whole tax have been exempted from assessment, and to some extent profit obtained in the province pays the tax elsewhere, but it cannot be contended that an annual sum of £108,000, ⅙th of which is deducted from the salaries of Government officials, represents the full legal amount due. The cost of collection is less than 1 per cent., but although the taxable limit has been raised, much time and labour is spent on the assessment and on hearing petitions of objection. The tax is exceedingly unpopular. Of the unofficial assessees, one out of every three petitions against his assessment.

Forests.

60. The transfer to the provincial section of the accounts of the whole forest income and expenditure, previously shared by the Provincial and Supreme Governments, has given the province an additional interest in the administration of the department. The departmental accounts show a cash surplus of £18,560, which compares unfavourably with that of the last and previous years. The accounts are, however, obscured by adjustments belonging to the accounts of other years. The preparation of capital and revenue accounts recently ordered will, it is hoped, go far to enable the financial aspect of forest working to be presented in a more intelligible form.

Provincial finance.

61. The system of provincial finance is explained in paragraphs 92 and 93 of the report. The new settlement, detailed in the latter paragraph, has had a welcome effect on the provincial exchequer, and, as shewn in paragraph 538 of the report, has given the province, on the figures for the past year, an income of £66,000 in excess of that which would have been

afforded by the old contract. The greater part of the increase, however, is due to the abnormal receipts from sales of land in the Canal Colonies already referred to. Income of this nature of course is available for increased grants for public works throughout the province, which, owing to the depleted condition of the exchequer in past years, are much needed in every department of the administration. Apart from this, however, the substitution of growing sources of income for fixed assignments, which was effected by the alteration in the provincial settlement, assures to the province a real participation in the general prosperity. The surplus receipts from Irrigation have not as yet exceeded the minimum revenue guaranteed to the province by the Supreme Government, but the opening of the canals of the Triple Project, which is now imminent, will remove this last exception to the general principle of elasticity.

Provincial income and expenditure.

62. The total provincial income aggregated £2,914,000 and the expenditure £2,685,000. In consequence the accounts which opened with a balance of £465,000 shewed a closing balance of £694,000. Of this, however, £255,000 comprise unspent balances of Imperial assignments for specific purposes, and the true provincial balance was £439,000. The figures indicate a far easier financial situation than has existed in late years.

Local funds.

63. The gross income of the district boards of the province amounted to £345,800, of which £90,500 was contributed by Government. The local rate collections amounted to £183,600. To enable them to discharge their obligations, several boards are finding it necessary to propose an enhancement of the local rate. Such proposals are readily sanctioned, as the proceeds, judiciously applied, bring in an ample return to the landholder on whom the rate falls. The main expenditure of the boards is on education and medical relief, but considerable sums are spent on horse and cattle-breeding and on veterinary objects and also on arboriculture. The expenditure on Civil Works amounted to £150,000, about half of which was spent on the roads. Owing to lack of funds and the difficulty of securing competent engineers, however, few district boards are able either to construct the roads required or maintain those existing in a moderate state of repair. The grants now being made from Provincial Funds should remedy this unfortunate state of things.

Municipal funds.

64. The income of the municipalities aggregated £476,000, of which £300,000 was derived from taxation, which falls at the rate of Rs. 2-10-2 on the population. The chief source is octroi. Of the expenditure over one-half was devoted to public health and convenience including large expenditure on capital account, one-twelfth to public instruction and one-sixteenth to public safety. The cost of collection and administration was one-ninth of the total expenditure. The municipalities were relieved during the year of police charges aggregating £34,600, Government having assumed all liability for the charges from April 1st, 1911. With one or two exceptions the municipalities closed the year with good balances aggregating for the province £123,800. The careful audit of the local fund auditors is mainly responsible for the marked improvement of late years in the municipal accounts.

Census of 1911.

Census.

65. The results of the census taken on March 10th, 1911, are published in Rai Bâhadur Pundit Hari Kishen Kaul's Report. The province has now a population of 24,187,750, of which 19,946,369 are

in British territory, 4,212,794 in Native States and 24,587 in the tribal territory on the frontier of Dera Gházi Khan district. There has been a decrease as compared with the population in 1901 of 2·3 per cent. for the province, 1·7 for British territory and 4·8 for the States. The decrease has been occasioned partly by a very severe outbreak of malaria in 1908, which operated as usual to lower the birth-rate in the following year, but mainly by the plague epidemic with which the province has been afflicted in the past decade and the local changes in the population vary in inverse ratio to the virulence of the epidemic. The recorded deaths from plague in the decade have exceeded two millions, and mortality has been greatest among those in the prime of life and especially among women of child-bearing age. In British districts indeed the male population has increased, the decrease being confined entirely to females.

District figures.

66. Roughly speaking, the districts in the west and in the north-east Himalayas have gained in population, while those in the north, centre and south have lost. The largest decreases have been in Ludhiána, Ambála, Amritsar, Rohtak, Gurgaon and Jullundur. Ludhiána has been the greatest sufferer from plague, and in this district population has fallen off by 23 per cent. On the other hand, every district in the Multán division, which has very generally escaped any visitation of plague, shows an increase. Special causes affect the figures of the Lyallpur and Jhang districts of this division, as also those of the Shahpur district of Ráwalpindi division, in all of which active colonisation work has been in progress, but the increases in Multán, Montgomery, Muzaffargarh and Dera Gházi Khan are entirely due to the general development of these thinly-peopled districts. Miánwáli and to some extent Attock are similarly circumstanced and shew large increases, but in Ráwalpindi, Jhelum and Gujrát, where plague was also prevalent, the population is practically stationary. In the other three divisions the succession of decreases returned for each district is broken only by Kángra, where in spite of the earthquake of 1905 a small increase has occurred, and by Hissar and Ferozepore, which districts share the growing prosperity of the Sirsa-Fázilka tract.

Abnormal conditions.

67. The abnormal conditions which have affected the population during the last decade are apparent in many of the census tables. The proportion of females, always low, had been gradually rising at each successive census since 1881, the result no doubt of improved conditions, both moral and material. This improvement has been entirely wiped out by the plague mortality among women, and 816, the present ratio per 1,000 males, is far below the figure recorded in 1881. The proportion of children in the population is at present abnormally large, especially among females, and the mean age of the people is proportionally lowered. Again, it is the Muhammadan west that has escaped the visitation of plague, and in consequence the proportion of the followers of the Prophet in the population has increased in the province generally.

Summer Census of Hill stations.

68. A special census of the three principal hill stations of the province was taken on June 30th, 1911, to ascertain their normal summer population. The results of this census are given in paragraphs 578 to 581 of the report. The figures are for Simla 37,895, for Murree 16,934 and for Dalhousie 7,592. In Simla the winter population is about half the normal summer population, but in Murree and Dalhousie, the summer populations of which consist largely of British troops, the winter figures are quite insignificant.

VITAL STATISTICS.

Births. 69. The average birth rate in 1911 was 43·9 *per mille*. The ratio shows a steady increase since 1909, when, in consequence of the fever epidemic of 1908, the birth rate dropped to 35·1 *per mille*. The following years have been remarkably free from malaria. Male births exceeded female births by 1·9 per cent. The birth rate in the four largest towns was also remarkably high, ranging from 45 *per mille* in Multán to 36 in Lahore.

Deaths. 70. The average death rate was 34·05 *per mille*, the continued prevalence of plague keeping up the rate above that of the most healthy years of the past. Infant mortality is still deplorably high, though much lower than ten years ago, and it is further noted that female infant mortality is now less than that of males. In Lahore the death rate was 29·86 only, and in Multán 32·55, but in Delhi, where plague was prevalent, it was as high as 59·58.

Fevers. 71. Even in a year of widespread freedom from malaria, a little less than half of the deaths are ascribed to fevers. The mortality from this cause, however, was 40,000 less than in the previous year, itself comparatively free from malaria. The death rate from fevers 15·33 *per mille* is the lowest recorded since 1877.

Plague. 72. The epidemic of plague in 1911 was considerably more severe than that of the previous year, and roughly a quarter of the total deaths of the year were returned as due to this cause. Hoshiarpur, one of the districts most severely stricken, has suffered for 14 years, and it is still a regular plague centre. The chief mortality occurred in April, May and June, the result, it is believed, of the heavy rainfall in March, which not only led to a large increase in the prevalence of fleas but kept back the high temperatures of the hot weather season, with the appearance of which the active plague season ends.

Other diseases. 73. The mortality from cholera was important in the district of Siálkot only, where it was disseminated from a local fair. To such fairs and to those at Hardwár is generally traced the source of infection of the cholera epidemics which appear from time to time. Small-pox was more prevalent than in the previous year, but the mortality was small. The figures for deaths from dysentery and diarrhœa, from diseases of the respiratory organs and from other causes do not present any special features.

Statistics. 74. The agency for the collection of the vital statistics is described in paragraph 121 of the report, and it will be seen that in rural areas it is the village watchman, whose position is described in paragraph 109, upon whom we are dependent for these returns. As regards numerical accuracy the census returns show that very fair reliance can be placed on the agency employed, but in the diagnosis of the causes of death it would be too much to expect any nicety of distinction: and as a matter of fact many diseases are vaguely returned as fever merely because there is an apparent rise in temperature.

MEDICAL RELIEF.

General. 75. Practically the whole of the hospitals and dispensaries open to the general public are maintained by the various municipalities and district boards. There are a few private institutions, and the Mayo Hospital at

Lahore is maintained by Government, which also assists the other institutions with grants-in-aid. Seventy per cent. of the total expenditure is defrayed by municipalities and district boards, 12 per cent. by Government, 12 per cent. from subscriptions and 6 per cent. from miscellaneous sources. The subscriptions, however, are mostly received from abroad for Mission female institutions. To check the abuse of free medical relief by those able to afford to pay for medical attendance fees are now charged in some cases to well-to-do patients at the dispensaries and hospitals, a practice which may have some effect in encouraging the private medical practitioner.

Patients.

76. Naturally in the circumstances of the year the number of out-patients shows a considerable falling off, malaria patients being 200,000 less than in the previous year. In-patients were only slightly less, and an increase in the number of female patients testifies to the growing confidence in the management of the hospitals. Surgical cases continue to increase rapidly, and the province is fortunate in the possession of many surgeons, both European and Indian, who have won the confidence of the people.

Special dispensaries.

77. Departmental dispensaries are maintained by the Canal, Police and Railway Departments for the treatment of their employees, the returns for which are separately maintained. The characteristics of the year in the case of these hospitals were similar to those above recorded. A proposal is on foot to open canal dispensaries to the general public in places where they are conveniently situated.

Pasteur Institute.

78. The Pasteur Institute has been established at Kasauli since 1900 and the anti-rabic treatment is increasingly resorted to by the Indian population. The institute is also the provincial laboratory of the Punjab.

Lunatic Asylum.

79. The number of inmates of the Lahore Lunatic Asylum steadily rises owing to the growing confidence in the institution. The facts that one-fifth of the inmates are criminal lunatics, that the majority of the patients come from neighbouring districts, and that only one-fifth of the total are females shews that a decrease in lunacy in the general population is not incompatible with an increase in the number treated in the asylum. As funds allow the comforts and amenities of the institution are being steadily improved and the lunatics are immeasurably better off than in their own homes.

Leper Asylums.

80. At the recent census 3,091 persons were returned as lepers, whereas the number annually treated in the five asylums of the province does not exceed 600. The law, however, does not authorise the detention of lepers against their will.

Vaccination.

81. The prevalence of small-pox in various parts of the province led to an increased resort to vaccination, but four-fifths of the operations were primary vaccinations. Some difficulty was experienced in the preparation of lymph at the vaccine institute and the percentage of successful operations declined. A new institute is being erected at Lahore and will shortly be opened.

Malaria Investigation.

82. As a result of the Imperial Malarial Conference of 1909, a special investigation of malaria is in progress in the province. The prevention and treatment of malaria are especially important in the Punjab, which suffers most severely from this scourge.

Sanitation.

Sanitation.

83. The authorities concerned with the sanitation and public health of the province are detailed in paragraph 119 of the report. In the towns generally, and especially in the large towns, the importance of the provision of a good drinking supply and of proper drainage works is fully recognised, and such schemes are continually being carried out with the advice and under the supervision of the provincial staff of experts. Experiments recently made under the orders of the Local Government for increasing the supply of water in wells by sinking tubes fitted with strainers have been very successful, and the results go far to solve the problem of a good water-supply. In the past improvements in the sanitation of municipalities has been greatly retarded by want of funds, an obstacle now removed by generous allotments for the purpose by the Imperial Government. Indeed more recently the difficulty has been to spend the grants. More harm than good is done by carrying out hastily-devised schemes, and the time and care necessary for the proper development of suitable schemes have not permitted of the full allotment of the annual grants. With the knowledge that funds are readily forthcoming for well devised schemes this difficulty too has now been removed.

Rural sanitation.

84. Although the future of sanitation is full of hope in the municipalities, in rural areas there is far less cause for satisfaction. The villager sees as yet little to object to in the sanitary condition of his surroundings, and the first development in rural areas must be educative. Until the peasant realises that disease and death lurk in dirt and filth he cannot appreciate the necessity for measures of sanitation to which he is unaccustomed, especially if introduced at his expense. Much, too, that is unsavoury in village life is not actively unhealthy, and here, too, improvement must wait upon the increased appreciation of, and desire for, better things. Special attempts were made in the colonies to secure the construction of sanitary villages, and this has led to a considerable improvement there which should react upon the parent districts.

Fairs.

85. In one respect the efforts of the sanitary officers have met with conspicuous success. The sanitary supervision of the great fairs of the province has greatly diminished the infection disseminated by the huge concourses of people that assemble from time to time at Thánesar, Nankána Sáhib, Pákpattan or Katás. In particular, epidemics of cholera, so frequently traced to such gatherings, have been greatly reduced in frequency and virulence by the measures taken.

Education.

Census results.

86. In Chapter VII of Part II will be found a full history of the introduction and progress of education in this Province. The Census returns show that in the total population only 1 in every 27 can read and write a letter, a definition of literacy somewhat stricter than previously adopted. Among Hindus the proportion of literates is 1 in 18, among Sikhs 1 in 17 and among Muhammadans 1 in 63. The figures indicate a slight reduction of the disproportionate illiteracy among Muhammadans as compared with the Hindu and Sikh communities. It is to the stricter definition of literacy, mainly, that the striking fact noticed in paragraph 652 of the report is due: that in the last 30 years the proportion of the male population classed as literate has only risen from 6·2 to 6·3 per cent. Literacy in English, on the other hand, increases apace. Ten years ago 1 in 10 of the literates was

literate in English, the proportion is now 1 in 8. In the past, however, the education of females has made but little headway, and whereas among the male population the proportion of literates is as high as 1 in 16, it is no more than 1 in 172 among the women.

Attitude of the people towards education.

87. As regards the attitude of the people towards education, no official encouragement is necessary to bring the trading and professional classes to an appreciation of its advantages, but this appreciation proceeds chiefly from the habit of mind which regards education merely as a stepping stone to a Government appointment or a clerical career. No such advantage attends the acquisition of an education which is not carried beyond the primary stage; consequently it is in the encouragement of elementary schools that there is most need for official effort. The ordinary agriculturist, moreover, is apt to consider that education spoils a ploughman. However, among the more thrifty agriculturists, especially those whose connection with the Army brings them into closer touch with the larger world, there is some appreciation of the material advantages which education is so often found to confer.

The absence of any material motive is also largely responsible for the indifference generally displayed towards female education, though in this case prejudices—both religious and social—also come into play. There are distinct signs, however, that an enlightened view of the importance to the community of female education is growing as educated men now want educated wives, and the future is full of hope.

Organisation of schools.

88. An account of the organisation of schools for general education will be found in paragraph 636 of the report. In the Punjab secondary schools include primary classes, a system different from that in force in some other provinces. In high schools scientific and commercial courses are prescribed in addition to the ordinary course leading to study in an Arts College. Attempts to evolve a type of primary school adapted to the needs of the agricultural classes have not hitherto been very successful, and the present type of "rural" primary school is scarcely more popular than the "zamindari" school which it replaced. The importance of examinations has been reduced to a minimum. The Infant and Lower Primary Examinations were abolished some years ago, and more recently the Middle School Examination was abolished in the Anglo-Vernacular Schools. In the Vernacular Schools in which education does not proceed beyond the Middle Department the examination serves as the school final examination, a purpose served in Anglo-Vernacular Schools by the Matriculation Examination. The superior material advantages of an English education lead to a very general desire to convert Vernacular into Anglo-Vernacular Schools, and indeed none but Government schools are of the former type. Apart from the necessity of obtaining teachers for the primary schools who are obtained from Vernacular Secondary Schools, the education afforded by these schools is in the opinion of expert educationalists a more thorough training, not only for the business of life, but also as a basis for further study.

Primary schools, Indian boys.

89. The increased grants for primary education in the last decade have led to a great expansion in the number of pupils receiving education in boys' primary schools who ten years ago numbered 140,391 and now 238,623. Numerically the increase is all that could be desired. Further improvement depends largely on the provision of funds, and in view of the possibility of money becoming available a carefully considered scheme of development has

been worked out. It is in the provision of trained teachers particularly that foresight has to be shown, and by recent improvements in the position of primary school teachers the present leakage of trained men into more attractive professions has been stemmed. Selection has already become possible in the admissions into the Normal Schools. Less than half the teachers in the primary schools at present, however, have undergone training and, to meet immediate requirements, training classes have been attached to many good Vernacular Schools. Great as is the progress already made towards the goal of universal education, the task that lies before the educationalist is still stupendous. Not only has the agriculturist to be persuaded that education is not actually an economic disability, but the mass of the low caste population has to be brought to the schools. Figures given in paragraph 651 of the report show how little the low castes have been affected as yet by the present educational movement. Great as must be the cost of free and compulsory education, it is not the only nor indeed the most difficult of the obstacles to be surmounted. Elementary education is largely free as it is, and the average fees of those who do pay is less than 2 annas a month.

Secondary education, Indian boys.

90. The demand for secondary education requires little stimulus Private enterprise, especially on the part of religious societies, is conspicuous in this direction. The number of pupils in secondary classes is 32,976 as compared with 21,822 ten years ago. The present number is about 3 per thousand of the total male population. Although fees have recently been raised, they at present barely cover one-half of the expenditure. In view of the desirability that education in the higher grades should be self-supporting, the increase in the fees, which had remained unaltered since 1892, can hardly be considered premature. A feature of the Punjab school system is the establishment of hostels which are attached to almost all the secondary schools to the great advantage of the pupils and the cause of education generally. In spite of improvements effected in the decade the education imparted in secondary schools is still below a satisfactory standard. The difficulty of teaching subjects in Anglo-Vernacular Schools through the medium of a language with which the teachers are themselves imperfectly familiar is one which will decrease in time. As yet the supply of qualified teachers is not keeping pace with the growing demand, and the tendency to extend secondary education regardless of the conditions under which it is given must be inimical to the best interests of the country. Still the class of student at the Central Training College, where secondary school teachers are trained, improves year by year, and the applicants for admission far exceed the accommodation at the college.

Indian girls' schools.

91. The development of female education in the decade has been phenomenal, and the number of girls attending public institutions has risen from 13,807 to 33,959. This increase has been most noticeable in the higher stages of education. Satisfactory as these figures are, as evidencing the weakening of prejudice against female education, the movement is in its infancy, and in this respect the Province is still very backward. The difficulty of obtaining trained teachers is acute. The Normal School at Lahore fails to attract girls from outside, and reliance has to be placed on local training classes for the supply of trained women teachers.

Collegiate education.

92. There are now eleven Arts Colleges in the Province as against 13 in 1901-02, but the number of students has increased from 1,331 to 2,659. University education indeed has attained a high standard in the Punjab, and the

vicinity of the Lahore Colleges, which comprise the bulk of the college students, is particularly favourable for the growth of a University spirit. The Punjab is unique in having an Oriental as well as an English Arts course, each leading up to a Master's Degree. The Oriental College is a survival of the intentions of the original promoters of a University scheme for the Punjab, and though at present lacking in vitality, can and should be made to combine the virtues of old-fashioned Oriental erudition with the demands of modern scholarship. The decade has seen an immense improvement in the English Colleges. The teaching of science has made great strides, and in discipline, in character training and in athletics much has been accomplished.

The University.

93. The reforms in the University introduced in 1904 are noticed in paragraph 647 of the report. In addition to the eleven Arts Colleges of the Province, six Arts Colleges of the Native States or North-West Frontier Province as well as the Training, Law and Medical Colleges are affiliated. The closer supervision of colleges by the University through its inspecting committees has had a beneficial effect, and the colleges aided by liberal grants from Government have made loyal efforts to meet the requirements of the University. At the same time the closer intercourse of the college professors has had a beneficial effect in developing a corporate University feeling.

Professional and technical education.

94. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, and the Engineering School at Rasûl in Gujrât district. The latter institution opened during the past year is a notable advance in professional training. The Province is well equipped in this respect. The Training College has already been mentioned. In the Medical and Veterinary Colleges it possesses institutions in which it takes a justifiable pride, and the Law College which, with the Oriental College, is maintained by the University needs no artificial stimulus. For the training of the craftsman the Mayo School of Arts and the Railway Technical School perform increasingly useful services. The industrial schools maintained by local bodies offer possibilities of development, and the whole question of industrial education has recently been considered by a committee whose recommendations are now before Government.

Education of Europeans.

95. The chief obstacle in the way of providing educational facilities for the domiciled community is the small and scattered nature of the numbers to be dealt with. A sufficiently high proportion of provincial expenditure on education is devoted to this object already, and policy is at present directed to economy, in the direction of restricting secondary education principally to boarding schools in the hills and of extending the number of primary schools under competent teachers in the plains. The wants of the poorer members of the community have been met by the provincialisation of the Lawrence Memorial School at Murree and the rapid rise in attendance there has shown that the want was real. The present financial position of the schools is far more satisfactory than it has been in the past, and an adequate supply of trained teachers can now be expected from the men's training classes at Sanáwar and from St. Bedes Ladies' College at Simla.

Education of the upper classes.

96. There is no doubt that the advantages of education are appreciated by the aristocracy of the Province; for practically every boy of what may be considered the upper classes is reported on as being educated. The Aitchison College at Lahore, the pupils at which belong to the leading families of the

Province, has maintained a well-deserved popularity. The recently established Queen Mary's College will, it is hoped, eventually do for girls of good family what the Aitchison College is doing so well for their brothers.

The Press.

Newspapers.

97. The total number of newspapers published during the year was 248, published mainly at Lahore, and in fact only 16 are published elsewhere than at Lahore, Amritsar and Delhi. The circulation of Indian-owned papers is still very small, though there has been a considerable rise in the decade. The greatest circulation returned by a newspaper published in English is 2,194 and by a vernacular newspaper 14,585. The average circulation of all papers is 287,641, and in the case of many it is under 1,000 copies. It is idle to suppose that, with the exception of a few of the newspapers, the emoluments derived from such journalism offer any attraction to men of the highest attainments, but some of the newspapers at least have reached a high level, and the proprietors of such papers recognise in an increasing degree their responsibilities to the public. This is still far from being the case with the less responsible vernacular productions, and during the year the bitterness of the religious controversy carried on necessitated the issue of a general warning by Government against the publication of articles calculated to foment sectarian animosity.

PART II.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

A. PHYSICAL FEATURES OF THE COUNTRY AREA CLIMATE AND CHIEF STAPLES.

AREA.

Introductory.

THE Punjab with its Feudatory States and the Baloch trans-Frontier covers an area of 136,330 square miles, and includes a population of 24,187,750* souls, and thus contains about one-thirteenth of the area and population of the Indian Empire. The population includes 12,275,477 Muhammadans, 8,773,621 Hindus and 2,883,729 Sikhs. Together with the North-West Frontier Province and Kashmir, which lie to its north, it occupies the extreme north-western corner of the empire, and, with the exception of that province, comprises all of British India north of Sind and Rajputana and west of the river Jumna. Thus situated, the immigrant swarms which have from time to time poured into India, and the conquering armies which have from time to time invaded it, have alike crossed the plains of the five rivers from which the province takes its name; while its great eastern plains, which part the waters that flow on the one hand into the Indian Ocean and on the other into the Bay of Bengal, have ever formed the battlefield of Northern India. Nor is its present interest inferior to its historical importance. Stretching northwards up to and beyond the great peaks of the Central Himalayas, and embracing the Tibetan valleys of Láhul and Spiti, it includes in its eastern districts a portion of Hindustan, and on its southern border it encroaches upon the great prairies of Rajputana, while its trans-Indus district of Dera Gházi Khan contains a race whose history and traditions are connected with Baluchistan rather than with the Punjab. Indeed, the diversity which marks the physical and geographical aspects of the province is no less characteristic of the races which inhabit it, of their origin, language, beliefs, customs and social structure.

Position, shape and size.

2. The province lies between 27° 39′ and 34° 2′ north latitude and 69° 23′ and 79° 2′ east longitude. Its shape is something between a dice-box and an hour-glass, the axes crossing at Lahore, and the longer axis running nearly east by south. The length of the longer axis is about 450, and of the shorter 160 miles; the eastern base measures some 370 and the western some 480 miles. The constriction in the middle is due to the fact that the northern boundary runs up into the hills of Chamba and Kulu in the east and of Hazára in the west, on either side of the State of Kashmir; while to the south the province stretches down the fertile banks of the Jumna to the east, and of the Indus to the west, between which two rivers the arid deserts of Rajputana extend northwards to within a hundred miles of Lahore.

Boundaries.

3. Along the northern border of the Punjab, Himalayan ranges divide it from Chinese Tibet and Kashmir. Between these ranges and the Indus the Hazára district of the North-West Frontier Province completes the northern boundary. On the west it is separated from the North-West Frontier Province by the Indus, except for a short distance in Miánwáli district, until that river reaches the border of the Dera Gházi Khan district which is divided from Baluchistan by the Suleimán Range. To its south lie Sind, Rajputana,

*This includes 28,587 for the Baloch trans-Frontier.

and the Muttra district of United Provinces of Agra and Oudh; while on the east the rivers Jumna and Tonse separate it from the same provinces, and on the north-east a mighty Himalayan range shuts it off from Chinese Tartary.

Political divisions, area and population.

4. The Punjab includes three classes of territory,—that belonging to the British Crown, that in the possession of the 34 Feudatory Chiefs of the province, and the small tribal area on the western border of Dera Gházi Khan district. The area and population of these separate classes are shown in the margin.

Territory.	Square miles.	Population.
British	97,213	19,946,369
Native States ...	36,551	4,212,794
Tribal territory ...	2,566	28,587
TOTAL PROVINCE ...	136,330	24,187,750

Of the total area of the province, some 24,000 square miles consist of mountainous or elevated tracts, and the remainder of plains. Of the 97,213 square miles included in British territory, about 44,500 are cultivated, of which 15,770 were irrigated in 1910-11; 26,000 more are classed as culturable and would repay the labour of the husbandman were means of irrigation available; forests occupy over 7,000 square miles, much of which is culturable; while the remainder is not available for cultivation or consists of inhospitable mountain-sides or unculturable waste. The dominions of the 34 Native Chiefs vary in size and importance from the principalities of Patiala and Baháwalpur, with areas of 5,412 and 15,000 square miles, and populations of 1,407,659 and 780,641, respectively, ruled over by Chiefs subject only to the most general supervision, to the tiny State of Darkuti, with an area of 8 square miles and a total population of 521 souls, whose ruler is independent in little more than the name. They may be grouped under three main classes. The Hill States, lying among the Punjab Himalayas, and held by some of the most ancient Hindu Rajput families in the world, include Chamba, Mandi, Suket, Sirmúr, and the 19 Simla States, of which last only eight exceed a population of 10,000, while only five exceed an area of 250 square miles. Along the western half of the southern border of the Punjab and separated from British territory by the Sutlej lies the Muhammadan State of Baháwalpur, consisting of the left Sutlej valley and a broad strip of the Rajputana desert. The remaining States, including the possessions of all our great Jat Sikh feudatories, lie wholly east of Lahore, and with insignificant exceptions occupy the centre of the eastern plains of the province.

PHYSICAL FEATURES.

Mountain systems.

5. The mountain regions of the Punjab naturally fall under four separate groups. To the north-east of the province lies the Punjab section of the Himalayan system, with the fringing range of the Siwáliks at its foot. In the south-eastern corner of the Punjab the Arávali system sends out insignificant outliers which run across the Gurgaon and Delhi districts and strike the Jumna at Delhi. The lower portion of the western frontier is constituted by the great Suleimán chain; while the north-western districts of the province are traversed by the hill system known as the Salt Range.

The Himalayas.

6. Large as is the area of the province included within the Himalayas, the Punjab claims a comparatively unimportant part of that vast system. On the east the British district of Kángra, with its outlying cantons of Kulu, Láhul and Spiti, and the Native States of Chamba, Mandi and Suket, together with those in the Simla Hills, all lie within the Himalayas, while connected ranges again cover portions of the Attock and Ráwalpindi districts on the west. These blocks are separated by Kashmir territory, which stretches down to the foot of the mountains from the boundary of Chamba on the east to the Jhelum on the west. Within

the Himalayas lie the hill stations of Simla, Kasauli, Dalhousie, Dharmsála, and in the west Murree, together with other less frequented sanitaria. Cut up as they are by provincial boundaries, it serves no useful purpose to allocate the various Himalayan ranges of the Punjab to the different divisions of the main system recognised by geographers. One of the peaks in Spiti exceeds 23,000 feet, and three others are over 20,000, but, with these exceptions, the peaks included in the province are of, for the Himalayas, fairly moderate altitude. The wealth of forest growth in the Himalayas constitutes the main care of the provincial Forest Department, while the valleys afford remunerative natural grazing to the ever-increasing flocks of sheep and goats which winter in the low hills, retreating before the rains to the higher pastures.

The Siwaliks.

7. The Siwáliks are an insignificant range of low hills which, rising abruptly from the plains, skirt the foot of the Himalayas from the Ganges to the Beas. At the widest parts, as they approach the Sutlej, they are some 10 miles broad. Between them and the Himalayas proper lie a series of fertile valleys known as Dúns; and the hills themselves are clothed with forest timber of some value, save at their western extremity, where they degenerate into little more than sand-hills. The torrents known as chos, which rush down the denuded hills spreading havoc in the fertile plains at their foot, have long been a source of anxiety to the Local Government and have necessitated special legislation for the prevention of further injury.

The Aravalis.

8. The Arávalis, which run through the Gurgaon and the south of the Delhi district, consist of low ranges of insignificant hills covered with brushwood, and are interesting chiefly from a geological point of view, as, with the exception of the isolated peak of Kirána in Shahpur, they form the northernmost extremity of the peninsular rock system, so distinct from the later formations of the Himalayas.

The Suleman chain.

9. The Sulemán mountains run almost due north and south along the western border of the Dera Gházi Khan district for about 200 miles. They consist of several parallel ranges of barren mountains, between which lie valleys that are fertile only by comparison, and are inhabited by Baloch tribes under the political jurisdiction of the Deputy Commissioner of Dera Gházi Khan and mostly connected in organization with the Baloch Chiefs of that district.

The Salt Range.

10. The Salt Range, which derives its name from the immense masses of rock salt found within its limits, stretches from the Jhelum valley on the east to the Indus on the west, and is included in the districts of Attock, Jhelum, Gujrát and Shahpur. Eastward the range consists of three spurs: two parallel with and north of the Jhelum, the more southern of which, the Rotás Range, contains the fort of that name and the hill station of Tilla. The third or Pabbi Range lies south of the river, which it crosses to join the other two at the central peak of Chel. Thence the united range runs westward in two parallel ridges till it culminates in the mountain of Sakesar in the Shahpur district, which has an elevation of 5,010 feet above sea level. Between these lines of hills, and topped by their highest summits, lies an elevated and fertile table-land, picturesquely intersected by ravines and peaks.

The river system.

11. The Himalayas give birth to seven great rivers which traverse the Punjab in a generally southerly direction on their way to the ocean. The hills once fairly left behind, their fall seldom exceeds two feet in the mile, and their course is in consequence exceedingly inconstant, varying, often considerably, from year to year. Thus in the process of time each stream has cut for itself a wide riverain lying well below the level of the surrounding plains, the banks of which mark on either side the extreme limits of the river's excursions. Within these lowlands, over the whole of which the stream has at some time or other flowed, the river winds its way in a narrow and ever-shifting channel. In the winter the stream is comparatively small; but as the mountain snows melt under the approach of the Indian summer, the waters rise and overflow the surrounding country, often to a distance of

several miles on either bank. As the cold returns at the close of the rainy season, the waters recede, leaving wide expanses of fertile loam or less fertile sand, moist for the hand of the cultivator.

These rivers, with the exception of the Jumna, find their way to the Indian Ocean. The watershed between the Indian Ocean and the Bay of Bengal, which forms the backbone of extra-peninsular India, lies in the province a few miles west of the Jumna.

West again of this line lies a peculiar area of closed drainage intermediate between the basins of the Jumna and Sutlej, into which the Márkanda, Sarusti, Ghaggar and other hill streams pour their waters; while the last-named river affords the only outlet, and passing away westwards into Rajputana itself gradually dwindles and finally disappears in the arid wastes of that province. Of the southern border of the Punjab, the whole eastern half, some 275 miles in length, which forms the southern base of this area of closed drainage, is unbroken by any river worthy of the name.

The Indus. 12. The Indus flows along the border of the Attock district, cuts off the Pesháwar and Kohát districts of that province from the Punjab, pierces the Salt Range at Kálabágh, and thence traverses the Miánwáli and Dera Gházi Khan districts at a distance of from 15 to 30 miles from, and parallel with, the Sulemáns. It receives no affluents of any importance on its right bank, for the scanty rainfall of the Sulemáns is insufficient to feed anything more than hill torrents of intermittent flow. From the east, however, it receives the combined waters of the Jhelum, Chenab, Ravi, Beas and Sutlej, the five great rivers which give the Punjab its name, and which traverse its plains, lying in that order from west to east.

The Jhelum. 13. The Jhelum, rising in Kashmir, flows due south along the eastern boundary of the Rawalpindi and Jhelum districts for a distance of 100 miles, and enters that district at the town of Jhelum, whence it flows south-west for 100 miles as far as Shahpur, and then 70 miles further in a southerly direction till it joins the Chenab 150 miles above its confluence with the Sutlej.

The Chenab. 14. The Chenab takes at once its name and its origin from the twin streams of the Chandra and Bhága, which drain the Himalayan valley of Láhul. Traversing Chamba and south-eastern Kashmir, with a generally western course, it re-enters the Punjab at the middle point of its northern border just below the town of Jammu. Thence it runs, first to the south-west but gradually changing to the south, for some 300 miles to join the Sutlej about 40 miles above the confluence of the latter with the Indus, receiving the waters of the Jhelum at about the midway point of its course in the plains, and those of the Ravi some 50 miles lower down.

The Ravi and Beas. 15. Between the Sutlej and Chenab flow the smaller streams of the Ravi and the Beas. The former rises in Chamba, enters the plains in the district of Gurdáspur, and flows 260 miles to the south-west, to join the Chenab about 90 miles above the confluence of that river with the Sutlej. The latter rises in the Kulu Himalayas, runs westwards through Mandi and Kángra, enters the plains at the north-western extremity of the Hoshiárpur district some 15 miles east of the Ravi and joins the Sutlej after a south-western course of some 70 miles.

The Sutlej. 16. The Sutlej, rising in Chinese Tartary, enters the province in the State of Bashahr, and, flowing through the territories of our hill feudatories, debouches on the plains at Rúpar in the Ambála district. Thence it flows due west for 120 miles as far as Ferozepore, where it receives the waters of the Beas, and thence south-west for some 270 more miles till, joined by the combined Ravi, Chenab and Jhelum, it pours the united waters of the five rivers into the Indus opposite Mithankot, some 70 miles above the Sind border.

The Jumna. 17. The Jumna and its hill tributary, the Tonse, form the greater portion of the eastern boundary of the province, along which they flow almost due north and south for a distance of some 220 miles. Owing to the proximity of the watershed the Jumna receives no tributaries in the plains of the province.

Terms explained.

18. It is as well to explain here certain geographical expressions in constant use in the province. The area in the plains lying between each of the rivers of the Indus system is termed a Doab, and in the order of the rivers from north to south these areas are the Sind Ságar, Jech, Rechna, Bári and Bist or Jullundar Doabs. The high land of the Sind Ságar Doab is the Thal and that of the western Jech, Rechna and Bári Doabs, the Kirána, Sándal and Ganji Bárs, respectively. The eastern Bári Doab in the Gurdáspur, Amritsar and Lahore districts is the Mánja. South of the Sutlej, the country occupied by the Sikhs is the Málwa, and its inhabitants Malwais. The Málwa includes the districts of Ferozepore, Ludhiána and Ambála and the States of Patiala, Jínd, Nábha, Maler Kotla and Kalsia. These States are known as the cis-Sutlej States. The Delhi Territory again is south of the Málwa, and roughly comprises the Rohtak, Delhi and Gurgaon districts and the south of Karnál and Hissar. Hariána is the eastern half of Hissar district, and includes part of Rohtak and of the States of Jínd and Patiala. Bhattiána is the country of the Bhattis in the west of Hissar.

The canals.

19. It will be convenient to describe the principal canals of the province in the order of the rivers from which each derives its supplies. The general feature is the comparative unimportance of the irrigation from the right bank of the rivers and it will be noticed that no canal takes out of the river Beas.

Indus Canals.

20. No perennial canal has been constructed as yet from the Indus; but a series of inundation canals take off from the right bank of the river throughout the length of the Dera Gházi Khan district and a second from the left bank in Muzaffargarh district. Both series are a legacy from pre-British rule and are controlled by the State. Considerable improvements have been made, especially in late years, and the number of individual canals has been reduced by linking together successive channels and abandoning the unnecessary multiplication of outlets from the river. The right bank system, the Indus Inundation Canals, now comprises 12 canals with 431 miles of main channel and 308 of distributaries and normally irrigates about 250,000 acres, two-thirds of which is in the kharif harvest. Normally the canals open about the middle of May and run for some five months. The chief channels are the Mánka, the Nur-Dhundi-Sohan, the Dhundi-Kutab, and the Kádra. The left bank system, the Muzaffargarh Inundation Canals, comprises six canals with a total mileage of 1,053 miles, normally irrigating some 280,000 acres. The canals open about the beginning of May and do not, as a rule, close before the beginning of November. The rabi area on these canals is greater than that of the kharif. The chief channels are the Maggi, Puran, Ghuttu and Magassan canals.

Jhelum Canals.

21. The Lower Jhelum Canal, a perennial canal, irrigating the Jech Doab in Shahpur and Jhang districts, was opened in 1901 and now embraces 150 miles of main channel and branches and 1,090 of distributaries. The canal takes off from the left bank of the Jhelum at the weir at Mung Rasúl where the river passes through the Pabbi branch of the Salt Range. After a course of 39 miles, in which it gradually approaches the ridge of the Doab, the canal bifurcates, at Fakírián, into two branches—the northern and southern, respectively. It has not yet been found necessary to open the Shahpur Branch, taking off at the 28th mile of the main line, which was designed to assist the country in the Jhelum riverain now irrigated by inundation canals. The irrigation from this canal is still expanding and has reached some 740,000 acres, two-thirds of which are in the rabi harvest.

Lower down the Jhelum a series of some 22 inundation canals take their supplies from this river in the Shahpur district. Sixteen are owned by private persons and six by Government: one of the latter, Corbynwah, is the only one of the series on the right bank. The total length of the Government canals is some 237 and of the private canals 227 miles. The normal area irrigated is about 60,000 acres on the Government canals and 55,000 on the private ones. The canals run from about the middle of April to the middle of September.

Fears having been entertained that the withdrawal of supplies from the Jhelum for the perennial canals would practically prevent inundation irrigation from these canals, the Shahpur Branch of the Lower Jhelum Canal has been designed to irrigate this area, and in part has been constructed. So far the fears have proved groundless and the branch has not been opened.

Chenab Canals.

22. The Lower Chenab Canal, now a perennial canal irrigating the Lower Rechna Doab in the Gujránwála, Lyallpur and Jhang districts, was opened as an inundation canal in 1887 and as a perennial canal in 1892. The weir is at Khánki, 8 miles below the railway bridge at Wazírabad; and the canal takes off from the left bank of the river. This canal now comprises 427 miles of main canal and branches and 2,278 miles of distributaries. At the 28th mile from Khánki the largest branch, the Gugera, carrying about half the total supply, takes off from the left bank and after a length of 55 miles bifurcates into the Lower Gugera and Burála Branches, 77 and 46 miles long, respectively, irrigating the southern side of the Doab. A few miles above the off-take of the Gugera Branch on the right bank of the main line is the Kot Nikka Branch, with a length of 18 miles. The extreme length of the main line is 40 miles, and it then divides into the Jhang, Rakh and Mian Ali Branches. The Jhang Branch is 62 miles long and bifurcates into the Lower Jhang (38 miles) and Bhowána (7½ miles) Branches irrigating the north side of the Doab. The Rakh and Mian Ali Branches, irrigating the centre, are 55 and 27 miles in length, respectively. The normal area annually irrigated by this enormous system is 2,200,000 acres; considerably more than two-thirds being in the rabi harvest.

Below the junction of the Chenab and Ravi, inundation canals take out of the river on both banks. Those on the right (in Muzaffargarh district), three in number, of which the Talíri is the most important, run from the beginning of May to the beginning of October, have a total length of 217 miles and normally irrigate some 60,000 acres. The canals are owned by the State and are worked administratively with the Muzaffargarh Canals from the Indus already described. The left bank series (in Multan district) is like the Indus Canals, a legacy from former rule. The number of separate canals has been greatly reduced by amalgamations, and there are now 8 canals served by 6 outlets from the river with 269 miles of main canal and branches, and 58 of distributaries. The canals open in the first week of May and close about the end of September: the normal irrigation is about 200,000 acres equally divided between the kharif and rabi harvests.

Ravi Canals.

23. The Upper Bári Doab Canal, now a perennial canal irrigating the Gurdáspur, Lahore and Amritsar districts, was the first canal constructed after the annexation of the Punjab. Undertaken originally as a project for the improvement of the Hasli Canal, constructed about 1633 by Ali Mardán Khan, in the reign of Shah Jahan, an independent alignment was finally adopted and irrigation began in 1860-61. The permanent weir at Mádhopur, at the foot of the hills in Gurdáspur district, was not completed until after 1875. The present canal on the left bank of the river comprises 370 miles of main line and branches including 16 miles of feeders and 1,571 miles of distributaries. The main line at its 31st mile separates into the Main and Kasúr Branches; the former after 25 miles gives off the Lahore Branch, and the latter after 7 miles the Sobraon Branch; the four branches following the crest of the ridges into which the tract is divided by its natural drainages. The normal area of irrigation is about 1,000,000 acres.

Some small inundation canals take out of the left bank of the Ravi in the district of Montgomery. Three of these are managed by the State as the Ravi Inundation Canals. These also include the small Deg Canal of the same district, which receives its supplies from the Deg, a minor tributary on the right bank of the Ravi. The total annual irrigation is only some 22,000 acres.

Lower down in the Multan district the Sidhnai system also affords irrigation from the Ravi. The canals are the Sidhnai and the subsidiary

Koranga, Fázil Shah and Abdul Hakím Canals, of which the Koranga only is on the right bank. As the Ravi is at this point often absolutely dry, the spring crop has to be matured by the aid of wells. The system has a total length of 200 miles, the Sidhnai itself contributing 163. The normal irrigation is some 250,000 acres, more than half being rabi irrigation.

Sutlej Canals

24. The Sirhind Canal is a perennial canal taking off on the left bank of the Sutlej at Rúpar in the Ambála district, where the Sutlej, issues from the Siwálik Hills. The canal, besides the British districts of Ludhiána and Ferozepore, irrigates the States of Patiala, Nábha, Jínd, Faridkot and Kalsia, of which the first three contributed to its cost and share the profits. Irrigation was begun in 1883. The main canal and branches have a length of 538 miles, and the distributaries 3,703 miles; 219 of the former and 1,938 of the latter belonging to the States. At the 39th mile the main line divides into the combined branch on the west and the Patiala feeder on the east. The former at once divides into the northern or Abohar Branch (126 miles long) and the southern or Bhatinda Branch (100 miles). The Patiala feeder gives off to the south the Kotla (94 miles), the Ghaggar (54 miles) and the Choa (25 miles) branches, irrigating almost exclusively native territory. The main line, the combined branch, and the Patiala feeder and 48 miles of the Abohar Branch were made navigable, and a special navigation canal was constructed from the Abohar Branch, 47 miles long, to the Sutlej, with a branch 4 miles long to Ferozepore. The irrigation from this canal fluctuates with the rainfall, and in the triennium ending 1910-11 averaged 857,000 acres, a low figure for the canal.

On the right bank of the Sutlej an important series of inundation canals irrigate the lower-lying portions of the Rechna Doab from the confluence of the Beas to the junction of the river with the Chenab. Here too inundation irrigation has existed from very early times. Practically the whole of the canals are controlled by the Canal Department, the only exceptions of importance being the Mehdi Khan and Kitchin Canals in Montgomery. The Government canals are arranged in two groups. The Upper Sutlej Inundation Canals in Lahore and Montgomery districts consisting of the Katora, Khánwah, Upper Sohág and Lower Sohág Canals, with a total mileage of 720 miles and a normal irrigated area of some 330,000 acres, in which the rabi area slightly predominates. These canals open about the middle of May and close soon after the middle of September. The Lower Sutlej Inundation Canals irrigate in the Multan district and comprise the Hájiwah, the Mailsi, the Muhammadwah and the Baháwalwah-Lodhrán Canals, with a total mileage of 720 miles and normal average irrigation of some 260,000 acres. The canals open about the beginning of May and flow until the beginning of November.

On the left bank the Grey Canals irrigate the low-lying country in the north of the Ferozepore district. The canals were constructed and are maintained on the co-operative system and were instituted by Colonel L. J. H. Grey, Deputy Commissioner of the district. Work was begun in 1875-76, and there are now 14 canals irrigating some 175,000 acres. Lower down the river the Baháwalpur State has a vast system of inundation canals taking off from the Sutlej and irrigating some 600,000 acres.

Jumna Canals.

25. The Western Jumna Canal takes off from the right bank of the Jumna at Tajewáli in Ambála district where the river emerges from the hills. The total length of the main canal and branches including the Lower Chautang Canal is 377 miles and of the distributaries 1,764 miles. Irrigation is afforded in Ambála, Karnal, Hissar, Rohtak and Delhi districts and in Patiala and Jínd States. The canal is by far the oldest of the great canals of the province, for as early as 1356 Firoz Shah III utilised the Chautang to conduct water to the royal garden at Hissar and Hánsi. Improvements were effected from time to time, especially by Ali Mardan Khan in 1626. The early alignments were defective and resulted in disastrous water-logging. The present canal is the result of various schemes of remodelling. For the first 14 miles it runs almost entirely in the old west branch of the river up to the regulator at Dádupur. Thirty-eight miles further down the Sirsa Branch takes off at

Indri running west for 115 miles. Some 31 miles further on the canal bifurcates into the Hánsi (47 miles), and Delhi (74 miles) Branches. The Hánsi Branch running west gives off the Butána Branch towards the south. The main line and Delhi Branch are navigable from the head works to Delhi, and exit to the river is provided by the Okhla Navigation Canal. The Hánsi Branch is navigable to where it meets the Southern Punjab Railway near Jínd. The irrigation from this canal is very variable as in years of good rainfall the demand for water is greatly reduced. In the three years ending 1907-08 the acreage averaged over 820,000 acres, and in the following triennium the average fell to short of 594,000 acres, the kharif area slightly preponderating.

The Agra Canal, though mainly a canal of the United Provinces, takes out of the Jumna at Okhla near Delhi and irrigates part of the Delhi and Gurgaon districts.

Ghaggar Canals.

26. In the enclosed drainage between the Sutlej and Jumna lie the Sarusti Canal (Karnál), the Rangoi (Hissar), and the Ghaggar Canals. The latter are two canals, one on either bank of the Ghaggar, taking off at the Otu dam near Sirsa, and were constructed with famine labour in 1896-97. The canals are partly owned by the Bikaner State, and have a total length including distributaries of 120 miles : the area irrigated varies enormously from year to year and averages about 25,000 acres in all.

Canals under construction.

27. From the above description the Upper Jhelum, the Upper Chenab and Lower Bári Doab Canals have been omitted. These canals, though rapidly nearing completion, are still under construction and have not yet taken their place among the physical features of the country. An account of the progress of the work will be found in the notice of irrigation in chapter IV.

Forests.

28. The forests of the plains are of the class known as dry forests, growing in the tracts of scanty rainfall in the west of the province. The trees are the farash (*tamarix articulata*), the karíl (*capparis aphylla*), the jand (*prosopis spicigera*), the van (*salvadora oleoides*) and a few acacias, chiefly kikar (*acacia arabica*). Such forests cover an area of some 3,000 square miles, but are economically of small value. In a few irrigated plantations and along roads and canals the shisham (*dalbergia sissoo*) is of some importance.

The rocky hills of the Salt Range and allied Kala Chitta are in parts covered with an open forest in which the olive (*olea cuspidata*) and phulahi (*acacia modesta*) are found.

Below 3,000 feet the Himalayan forests are composed of scrub and bamboo (*dendrocalamus strictus*). Between 2,500 and 5,000 feet the chil pine (*pinus longifolia*) is the principal tree. Between 5,000 and 8,000 is the zone of the valuable deodar (*cedrus deodara*) which is found with blue pine (*pinus excelsa*), the silver fir (*abies webbiana*), the spruce (*picea morinda*) and various deciduous trees. Above 8,000 feet the deodar and blue pine are absent, but in the higher elevations rhododendron, birch and juniper are found.

The Punjab plains.

29. South of the Himalayas stretch the great plains which constitute by far the larger portion of the province. If we except the Himalayan and Salt Range tracts, the Punjab presents, from the Jumna in the east to the Sulemáns in the west, one vast level, unbroken save by the eroded channels of the rivers, by the insignificant spurs of the Arávali mountain system in the south-eastern corner of the province, and by the low hills of Chiniot in Jhang and Kirána in Shahpur. From the watershed of the Jumna the slope is uniformly westwards towards the Indus basin, broken locally by the successive steps which part the catchment-basins of the Punjab rivers, and which, often almost imperceptible to the eye, always lie close to the right bank of the channel. From the foot of the hills the plain country slopes southwards till it approaches the southern border of the province, when it begins to rise again towards the peninsular area. The combined result of these two slopes is a fall in a south-westerly direction, at right-angles to the mountain ranges and parallel with the general course of the rivers ; but the fall is exceedingly gentle, seldom exceeding two or three feet in the mile.

General character of the soil.

30. The whole of these vast plains are of alluvial formation. Stones are unknown save at the immediate foot of the hills; micaceous river sand is to be found everywhere at varying depths; and the only mineral is kankar, nodular accretions of limestone, and even kankar disappears in the west. The soil is a singularly uniform loam; true clay is almost unknown; and the quality is determined chiefly by the greater or smaller proportion of sand present. In the local hollows and drainage lines the constant deposit of particles of clay has produced a stiff tenacious soil, singularly adapted to rice cultivation; while in the beds of the great rivers and on the wind-fretted watersheds pure sand is commonly found. In parts, and especially where local conditions raise the level of the water-table, the salts natural to the soil have been concentrated on the surface by continuous evaporation, and have covered the ground, often for miles together, with a saline efflorescence known as kallar or reh which is fatal to vegetable life. But where neither reh nor sand is present, the soil is uniformly fertile if only the rainfall be sufficient or means of irrigation be available. Throughout the greater part of the western plains of the Punjab, however, the insufficiency of rainfall is a permanent condition, and until recently the uniform aspect of the country was that of wide steppes of intrinsically fertile soil, locally known as Bárs, useful only as grazing-grounds for herds of camels and cattle. The great Thal which lies between the Jhelum, Chenab and the Indus consists of a series of rolling sand-hills formed by the wind, which run parallel to the great breakwater of the Salt Range, and are separated by valleys in which the original surface is exposed. The construction of canals in the Bár and Thal tracts is, however, entirely changing the face of this part of the country. The depth of water from the surface varies greatly. Throughout the broad riverains and immediately below the hills it ranges between 10 and 30 feet; but the depth increases with the distance from the rivers and the hills, and in many parts of the province rises as high as 150 to 200 feet, while the water, when reached, is too often so brackish as to be harmful to both animal and vegetable life.

CLIMATE.

Rainfall.

31. The Punjab enjoys two well-marked seasons of rainfall. The monsoon season, which brings it by far the greater portion of its annual supply, lasts from the middle of June to the middle or end of September, and upon this fall the autumn crops and spring sowings depend. The winter rains fall early in January, and though sometimes insignificant in amount affect very materially the prospects of the spring harvest. The table in the margin shows the most recent statistics of rainfall for certain selected stations, the figures being corrected averages of all past records which can be depended upon.

Tract.	Station.	Normal Rainfall.		Annual.
		Monsoon,—June-September.	Cold weather,—December-March.	
Punjab Hills ...	Simla	47·71	8·79	62·60
	Murree	34·33	11·52	54 83
	Dharmsála	96 59	14·90	116 71
Salt Range ..	Rawalpindi	20·49	7·89	32 35
Submontane ...	Ambála	25·67	4·32	31 74
	Siálkot	24 30	5 96	33 08
East and North Punjab.	Delhi	22 59	2 50	26 71
	Rohtak	16·40	2·09	19·67
	Sirsa	10·63	1·67	13·30
	Ludhiána	20·55	4 08	26 23
	Lahore	13·31	3·03	17·73
South and West Punjab.	Khusháb	7·76	2·41	11·67
	Lyallpur	9·71	1·89	12 66
	Mianwáli	6 99	2·83	11·49
	Montgomery ...	7·66	1·72	10 05
	Multan	4·55	1 38	6·53

Distribution of rainfall.

32. The rainfall is necessarily heavier in the Himalayas than in any other portion of the province, the vapour-laden air from the south-east and south precipitating its water as it rises to top the great barrier which it finds across its path. The highest average of the province is 116·71 inches recorded in the exceptional case of Dharmsála, and the figures probably nowhere fall below 55 inches (Murree) within the Punjab Himalayas. In the plains the rainfall is greatest in the east of the province, as the Bombay monsoon is exhausted of its vapour in its passage over the great plains

of Sind and Rajputana, while the west winds from Baluchistan pass over an arid tract and leave such moisture as they may have collected on the western slopes of the Sulemáns, so that the Punjab depends for its rain very largely upon the south-east winds from the Bay of Bengal. Thus we find that in the plain country the rainfall decreases rapidly as the distance from the hills increases, and markedly also, though less rapidly, the further we go west. The submontane zone, which skirts the foot of the mountains, enjoys an annual fall ranging from 32 to 36 inches, while in the strip of country lying along the right bank of the Jumna the average lies between 26 and 30 inches and in the portions of the Salt Range tract immediately under the hills the figures are similar. In the eastern plains the annual fall may be said, roughly speaking, to decrease by about one inch for every 10 miles of distance from the hills, and ranges along their southern border between 20 inches in the east (Rohtak) and 13 in the west (Sirsa). But directly we cross the meridian of Lahore, the figures fall to some 10 or 12 inches, while in the neighbourhood of Multan, in the extreme south-west of the province, the yearly average is only 5 to 6 inches. The extension of canal irrigation over the Western Punjab is undoubtedly having the effect of increasing the rainfall in this part of the province and may have unforeseen results on the rainfall of the country. Moreover, the great rivers have a slight local effect in increasing the amount of precipitation in their immediate neighbourhood; and this influence is of more importance than would appear from the bare statistics, as the addition thus made to the total annual fall is distributed in the form of more or less periodical showers which often bring timely moisture to the crops.

Temperature.

33. Owing to its geographical position, to its scanty rainfall and cloudless skies, and perhaps to the wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than does that of any other part of India. The extreme heat of the summer months begins to moderate about the middle of September; and from the beginning of October, though the days are still hot, the nights are fairly cool. From that time the temperature sinks lower and lower, till the minimum is reached with the fall of the winter rains in the early part of January, when sharp frosts are common, and water exposed at night with due precautions is frozen in all parts of the province. The temperature then rises again slowly but steadily till the end of March. With April the hot weather proper may be said to begin. For the next three months the Punjab acts as the exhaust-chamber of India, and creates that monsoon of which it enjoys so small a share. Within the hills the seasons and their changes are very similar, though of course the heat is much more moderate and the cold much more severe. From the middle of December to the middle of January snow-storms are heavy and frequent throughout the Himalayas proper; while even in the height of summer the thermometer seldom rises above 90° in the shade.

Details of temperature and winds.

34. The following figures show some details of temperature and of the direction of the prevailing winds:—

Stations.	Temperature in 1911.		Record temperature.		Temperature of day whose normal is		Prevailing winds.		
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	January to May.	June to September.	October to December.
Simla	81·8	17·1	94·4	17·1	76·3	34·0	...	...	...
Murree	90·1	20·7	102·0	12·0	82·5	32·9	S. E.	N.	S. E.
Rawalpindi	113·4	32·4	118·0	23·3	103·5	36·3	N.	N.	N.
Ambála	113·5	35·9	115·8	30·7	106·5	42·2	N. W.	S. E.	N.
Siálkot	112·0	35·5	121·3	28·5	107·6	41·3	N.	E.	E.
Delhi	113·0	40·2	118·0	32·5	107·1	47·3	W.	W.	W.
Sirsa	116·3	34·5	121·1	29·0	109·3	41·4	W.	S. W.	N. E.
Ludhiána	114·5	39·5	119·0	24·0	107·6	43·2	N. E.	S. E.	W. & N. W.
Lahore	116·9	36·2	120·3	29·2	109·7	39·4	N. W.	S. E.	E.
Khushab	119·4	36·4	120·4	25·0	108·9	40·4	N. E.	E.	E.
Montgomery	119·4	33·5	121·9	27·5	112·2	40·5	N. E.	S. W.	E.
Multan	118·3	38·5	121·0	29·0	109·1	42·4	N.	S. W.	N.

It will be noticed that the lowest temperature observed at Simla in 1911 constitutes a record for that station. In the plains the coldest days occur in the last

week of December or first week in January: in the hills the coldest weather is exactly a month later. The greatest heat is recorded both in the hills and plains in the last days of May and the beginning of June.

Natural Divisions.

35. Thus the Punjab may be divided, in accordance with its physical features, into five natural divisions. The Himalayan region and the corner cut off by the Salt Range are special tracts distinct in all their characteristics from the plain country of the province. The submontane zone is the connecting link between the two. Finally, the plains are divided by a meridian passing through Lahore into two very dissimilar tracts which may be called, respectively, the eastern and the western plains. One of the most striking features of the province is the strong contrast which these two tracts present, and the comparative suddenness with which the transition takes place as the intangible line which separates the one from the other is crossed. Natural divisions of the province.

36. The Himalayan tract includes an area of some 22,000 square miles, much of which is wholly uninhabited, and a scanty population of about 1,725,000 souls living scattered about the remaining area in tiny hamlets perched on the hill-sides or nestling in the valleys, each surrounded by its small patches of terraced cultivation, irrigated from the streams which run down every gulley, or fertilised by the abundant rainfall of the hills. The nature of the country prevents the growth of large towns; trade is confined to the little that crosses the high passes which lead into Tibet; and the people are almost wholly rural, supplementing the yield of their fields by the produce of numerous flocks of sheep and goats, and by rude home-manufactures with which they occupy themselves during the long winter evenings. They keep very much to themselves, migration being almost confined to the neighbouring mountains and low hills. The Himalayan ract.

37. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum, and a small portion of the Shahpur district. Its physical configuration is so broken and confused that it is impossible without going into great detail to separate it into parts, each of which shall be even approximately homogenous. The mountainous tracts of the Murree and Kahúta tahsils of the Rawalpindi district approximate closely in characteristics to the Himalayan tract and here there is an ample rainfall. Elsewhere except immediately under the hills, the rainfall, while quite sufficient in ordinary years, leaves little margin as protection against distress in unfavourable seasons, while irrigation is almost unknown. The tract has an area of about 9,000 square miles and a population of some 1,575,000 souls. The town of Rawalpindi owes much of its importance to the garison stationed there: but its population exclusive of cantonments is 46,642. The Salt Range tract.

38. Skirting the base of the hills, and including the low outlying range of the Siwáliks, runs the narrow submontane zone, with an average breadth of some 25 to 30 miles measured from the foot of the Himalayas proper. This tract, secure in an ample rainfall, and traversed by streams from the neighbouring hills, has an area of some 10,000 square miles, comprises some of the most fertile and thickly-peopled portions of the province, and is inhabited by a population of about 4,175,000 souls, who occupy an intermediate position in regard of race, religion and language between the peoples of the hills and of the plains. The tract has only one large town, Siálkot, which, exclusive of cantonments, has a population of 48,595 souls; its trade and manufactures are insignificant, and its population is almost entirely agricultural, and in the low hills pastoral. The submontane tract.

39. Turning to the plain portions of the Punjab, we find that east of Lahore the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons; but over the greater portion of the area the margin is so slight that, save where the crops are protected by artificial irrigation, any material reduction in the supply entails distress, if not actual famine. The eastern plains cover an area of some 36,000 square miles The eastern plains.

with a population of about 10,600,000, and may be roughly divided into four separate regions. A broad strip parallel to the submontane zone partakes in a lower degree of its ample rainfall. It is traversed by the Upper Sutlej, the Beas, the Ravi, the Bári Doáb Canal, and many smaller streams, which bring down with them and deposit fertilizing loam from the lower hills; irrigation from wells is everywhere easy; and the tract is but little inferior in fertility, security of produce and populousness to the submontane zone itself. Its width varies from 20 to 30 miles and its area is some 8,800 square miles. The next most fertile strip is that running along the eastern border of the province, parallel to the river Jumna. It enjoys a fair average rainfall; it includes the low riverain tract along the Jumna itself, where well irrigation is easy; the Sarusti and its tributaries inundate a considerable area, and much of it is watered by the Agra and Western Jumna Canals, so that it is for the most part well protected against famine. It has an average breadth of some 35 or 40 miles and its area is about 5,000 square miles. Along the southern border of the eastern plains lie the tracts known as Hariána and Bhattiána, which constitute the most unfertile portion of the area under consideration. A large part of this tract skirts the great Rajputana desert; the soil is often inferior; the rainfall always scanty and precarious; while, except in the south-eastern corner, where alone wells can be profitably worked, irrigation was till recently unknown, save where the Western Jumna Canal enters Hissar and the Sutlej borders the Sirsa district. Its width is from 40 to 50 miles; its area about 11,900 square miles. This, and the central portion, next to be described, together constitute the great area of closed drainage already mentioned. This is the part of the Punjab which has suffered most severely in famine years, but much of it has now been protected by the construction of the Sirhind Canal, and the Sirsa Branch of the Western Jumna Canal. The remaining or great central portion of the tract includes the larger part of the great Sikh States. It occupies an intermediate position in respect of fertility between the two preceding tracts, the rainfall generally being highest and the soil best to the east, west and north, in the direction of the Jumna, the Sutlej and the hills, and lowest and worst in the centre and south; while to north-east the Ghaggar system of hill streams inundates a certain area, and well irrigation is practised along the Sutlej and the northern border. As noted above, the opening of the Sirhind Canal has greatly altered the agricultural conditions of this part of the province.

Within the eastern plains lie the three great cities of Delhi, Amritsar and Lahore, besides a large proportion of the larger towns; and the population is, by comparison with that of the Western Punjab, largely urban. Trade and manufactures flourish, and the greater part of the culturable area is under the plough.

The western plains.

40. The great plains lying to the west of the Lahore meridian present a striking contrast with those to the east of that line. They form the common terminus of the two Indian monsoons, which have exhausted themselves of their vapour before they reach their goal; and the rainfall, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river banks left moist by the retreating floods. But in this very circumstance they find their security against famine or distress from drought, for their cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass, in itself a sufficiently serious calamity. Rain is, of course, needed here as elsewhere; but its absence means only a diminished yield, and not, as in portions of the eastern plains, no yield at all; and so little is sufficient, if the fall comes at the right time, and absolute drought occurs so seldom, that the crops may be said never to fail from this cause.

The western plains cover an area of 59,000 square miles with a population of 6,100,000 or about a quarter of the population of the province. They comprise four different tracts of country. Throughout their length they are traversed by five great rivers, the Sutlej, Ravi, Chenab, Jhelum

and Indus, and along either side of each of these runs at a distance of a few miles a more or less distinctly marked bank which defines the excursions of the river as it has within recent times shifted from side to side in its course. The banks include between them strips of low-lying land which are periodically inundated by the rising floods of the summer or in which the nearness of sub-soil water makes well irrigation easy. Inundation canals already described have been carried from these rivers across the zone of well irrigation into the higher land beyond and render cultivation possible along their courses. The prosperity of this tract, in which the older cultivation of the western plains almost wholly lies, depends upon the rainfall in the mountain catchment areas of the rivers, as insufficient floods may seriously affect the working of the inundation canals. Outside the river valleys lie the high and arid uplands. Of these the Thal or sandy desert of the Sind Sagar Doab and the huge desert area of Baháwalpur stand apart. Lying higher and of older formation than the Bárs of the Jech, Rechna and Bári Doabs the action of the wind has converted a level plain of fertile land into a succession of rolling dunes of sand separated by long troughs of stiffer culturable soil. Covered by a scanty growth of stunted desert trees the country affords precarious grazing, especially for camels, and in the long hollows wells are sunk and the drainage collected in the depressions provides moisture for a restricted cultivation. Though some of the finest wheat in the world is grown on the wells of the western Thal the cultivated area is wholly insignificant. The crowning triumph of irrigation in Northern India will be attained when the waters of the Indus are conducted into the desert of the Sind Ságar Doab: but long before this the projected canal from the Sutlej will convert the Baháwalpur Cholistán into a prosperous and fertile country. Our third division consists of the disappearing area of the unirrigated Bár land. Once embracing the high upland of the Jech, Rechna and Bári Doabs, the only unirrigated Bár to-day is the Ganji Bár of the Montgomery and Multan districts, most of which will shortly be commanded by the Lower Bári Doab Canal now approaching completion. These Bárs are similar in formation. Huge expanses of fertile loam, whose level area is only broken by the shallow troughs in which once flowed the many separate streams now collected in the deep-cut river valleys of the present day: the depth to spring level so deep that well irrigation is impracticable and drinking water wells a prized possession: the Bárs were covered with a growth, in places dense, of desert trees and after rain with a carpet of grass affording forage for herds of camels, cattle, sheep and goats and a livelihood for the nomad tribes who made the Bár their home. The only cultivation the country afforded was a precarious crop grown in the depressions to which the drainage of the higher country round was carefully conducted. Practically uninhabited, for the Bár nomads were insignificant in numbers, the uplands contained no settled villages and were in their original state so worthless that free offers of land were refused. Such still is the Ganji Bár to-day.

The Sándal Bár of the Rechna Doab and the smaller Kirána Bár of the Jech Doab present a striking contrast. The Lower Chenab and Lower Jhelum Canals have brought to the uplands the water which alone was required to enable the fertile soil to yield its ungrudging increase. To each plot of the chess board into which the Bárs have been divided the water is brought first in the canal, then in the distributary and finally in the water-course: so that to-day the country supports in unparalleled prosperity a population which now numbers a hundred to every one of its former poverty-stricken denizens: and the land once refused as a gift now sells with ease at £15 an acre. To carry off to the port of export the surplus produce of this fortunate region three lines of railway have been constructed, and so great is the traffic that from their point of convergence in the west a double track to Karáchi has had to be provided. As entrepots of trade towns have sprung up in all directions, the profits gained in which are so great that building sites readily sell at the rate of £1,000 an acre. The colonies now enable the western plains to challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan is still numerically the only town of first class importance, and the

population is still markedly rural. The population of Lyallpur (19,578) and Gojra (5,417) in the Chenab colony and Sargodha (8,849) in the Jhelum colony by no means reflects the comparative importance of these infant towns.

Chief Staples.

Wheat.

41. The development of canals in the past ten or fifteen years has led to a great expansion of the wheat area which now, in an ordinary year, occupies over $8\frac{3}{4}$ millions of acres or approximately one-third of the annual area harvested in the province. Except in the Delhi division and in Ferozepore, wheat is everywhere the principal crop grown, and in several of the northern districts accounts for as much as half the annual harvested area. The estimated weight of the produce annually raised is some three million tons valued at present Punjab prices at approximately £20 millions sterling. More than half the area under wheat is irrigated, and this fact steadies the fluctuations in area and outturn consequent on the caprices of season. It is estimated that on an average of years about one-quarter of the wheat raised in the province is exported beyond its boundaries.

Gram.

42. Next to wheat both in area and value comes gram (*cicer arietinum*) which, however, is mainly sown on unirrigated land, and is accordingly subject to violent fluctuations both of area and outturn. In favourable years the chief gram-producing districts are Hissar and Ferozepore which, with the remaining districts of the Delhi division, raise half the gram crop of the province. Though grown throughout the province gram is naturally less popular in the areas of deficient rainfall of the North and West Punjab. On the average it is probable that 4 million acres are sown with this crop each year, the produce raised being estimated at 1 million tons and valued at some £5 millions sterling. Gram is exported but not to any considerable extent.

Barley.

43. Barley is a crop which is gaining ground in the province, though its present area is only about a million acres. It is grown chiefly in Hissar, Gurgaon and Ferozepore, and is often sown mixed with wheat and gram as it matures even if the rainfall is not sufficient for the wheat. The demand for the Indian breweries is extensive, and there is some hope that the English brewers too may before long adopt Indian barley. The weight of the annual produce is estimated at 300,000 tons valued at about £1 million.

Rice, maize, millets.

44. The autumn staple cereals are rice, great millet (*jowár=sorghum vulgare*), spiked millet (*bájra=pennisetum typhoideum*) and maize. These are all grown for food and do not figure largely in the export tables. Speaking generally, maize and rice are grown in the montane and sub-montane tracts to the complete or practical exclusion of the millets, which elsewhere are the more important crops. The relative areas of jowár and bájra differ greatly even in similar tracts, but bájra is on the whole most favoured in the Rawalpindi and Delhi divisions and jowár elsewhere. Jowár is the cheapest of these cereals. The ordinary areas of the crops may be taken as rice 700,000 acres, jowár 1,200,000 acres, bájra 2,400,000 acres, maize 1,200,000 acres; but the jowár and bajra areas vary greatly from year to year. The weight and value of the produce grown on these areas may be taken as—rice 350,000 tons=£$1\frac{3}{4}$ millions, jowár 250,000 tons=£1 million, bájra 475,000 tons=£$2\frac{3}{4}$ millions, and maize 400,000 tons=£2 millions. Jowár is, however, largely grown for fodder, and should in that case be recorded as a fodder crop (chari). Difficulty often arises in observing the distinction in practice.

Oilseeds.

45. The principal oilseeds are rape (sarson=*brassica campestris*), toria, a variety of the same, and sesamum or til. A little linseed also is grown. The area under oilseeds is about 1,300,000 acres annually, rape occupying half and toria a further third of the total: rape is grown throughout the province, but in the tracts of the Central Punjab to which irrigation has in recent years been extended toria is by far the more popular crop to the practical exclusion of rape. Toria is sown in August when canal water is still plentiful before the river floods subside. It is a fast-growing crop being cut in November or December, and the cultivator depends either on a lucky fall of rain or the

prolongation of full supplies in the canal to mature the large area sown. He, of course, not seldom fails, but the profits of success are enormous. and the popularity of the crop is spreading among more conservative communities. It is estimated that 190,000 tons of oilseeds are raised annually in the province with a sterling value of £1½ millions. Considerably more than half the total annual produce is exported from the province.

Cotton.

46. Cotton is grown generally throughout the province, but principally in the Multan and Lahore divisions. The amount grown in the Jullundar and unirrigated parts of Rawalpindi divisions is small. Cotton is a delicate plant and requires moisture regularly ; for this reason it is seldom grown except as an irrigated crop. The ravages in recent years of the boll-worm have greatly affected the popularity of cotton, though the high prices now obtaining make it a tempting crop in spite of the undoubted risks. The cotton grown is of the short stapled variety known as " Bengals " of which a hundred pounds of uncleaned cotton gives about 30 lbs. of clean lint. About 1,200,000 acres are placed under cotton annually. The weight of uncleaned cotton raised on this area amounts to some 250,000 tons, valued at about £ 2½ millions. The value of raw cotton ordinarily exported from the province may be taken at £1½ millions.

Sugarcane.

47. Sugarcane is an important and valuable crop in Rohtak, Delhi Karnál, Jullundar, Hoshiárpur, Amritsar, Gurdáspur, Gujránwála and Lyallpur districts. A large additional area has been placed under this crop since the opening of the Lower Chenab Canal, but practically none is grown on the Lower Jhelum Canal, and the total sugarcane area is fairly stationary at 400,000 acres, of which Gurdáspur alone contributes some 61,000. The annual produce is estimated at 278,000 tons of gur valued at £2⅔ millions, but the province imports some £2 millions worth of sugar annually which might no doubt be produced in the province itself were it not that other crops are more remunerative.

Live-stock.

48. In a country of which the population is preponderatingly agricultural a considerable proportion of the wealth of the people lies in its live-stock. The latest census gives the following figures: Bulls and bullocks 4,248,493, cows 3,386,950, male buffaloes 624,861, cow-buffaloes 2,241,223, bovine young stock 3,821,389, sheep 4,591,591, goats 4,253,194, horses and ponies, 360,502, mules 38,929, donkeys 583,617, camels 270,522. Increased attention has been paid in late years to this subject since the transfer of the chief horse-breeding arrangements to the Army Remount Department and the reorganisation of the Civil Veterinary Department. As regards cattle, sheep, and goats information has been collected and published in a monograph on " Cattle and Dairying in the Punjab."* Briefly speaking the breeding and exporting tracts for draught cattle are (*i*) Hariána and Bhattiana in the south, (*ii*) the Pothwar-Dhanni tract of Jhelum, Ráwalpindi and Attock in the north, and (*iii*) the extreme south-west of the province. The Málwa and district of Lyallpur are self-supporting, but the rest of the province depends on these breeding tracts to supplement the local cattle supply. The best breeds of milch cows are again the Hariána animals and the Sáhíwál (Montgomery) cows. Except for some export from Hariána to the United Provinces the cattle and dairy trades are confined to the province. Reliable figures are impossible to obtain, but it is certain that large profits are derived by farmers from stock raising in the breeding tracts and by the sale of ghi throughout the province. As an example Rs. 3½ lakhs worth of ghi is annually exported by rail alone from Karnál district. The lucrative trade in cattle and ghi supports a large class of middlemen, chiefly of the distinctively trading classes.

Wool.

49. Sheep are important in the south-west where wool is a staple product and again in the pastures of Kángra and Kulu. The finest wool is said to be that of Hissar. Wool, however, is largely produced throughout the plains and is woven and felted into blankets and rugs. A large amount of wool is

*By A. M. Stow, I.C.S., *Civil & Military Gazette* Press, Lahore, 1910 ; also see " Fodder Crops of the Punjab," Sir J. M. Douie, 1912.

accordingly used locally, especially at the power looms of the Egerton Woollen Mills at Dhárriwál in the district of Gurdáspur, and the indigenous industry has suffered little apparently from foreign imports which indeed are inconsiderable. On the other hand, a considerable though fluctuating export trade in wool is carried on, the chief centres being Multán, Amritsar, Fázilka and Abohar (Ferozepore), Ráwalpindi and Gujar Khan (Ráwalpindi) and Básal (Attock). The value of wool annually exported amounts to between three and four hundred thousand pounds.

Hides and skins.

50. The production of hides and skins in a community so completely agricultural as that of the Punjab is normally very considerable, and in times of fodder scarcity or famine becomes enormous. A large amount of the material is used locally, but the value of the annual exports is not less than £500,000.

2. HISTORICAL SUMMARY.

1803. Early history.

51. The administration of the territory now included in the Punjab begins with the measures necessitated by the treaty of Anjangaon, dated December 30th, 1803, between the British Government and Daulat Rao Sindhia, by which the latter ceded to the British all his "forts, territories, rights and interests" in the countries north of the Jumna. The country in question was at the time in a state of anarchy. With the decay of the Moghal power the area between the Jumna and the Sutlej had become a prey to three contending forces. On the west in Bhattiána the Bhattis, under their leaders Bahádur Khan of Fatahabad and Zábita Khan of Sirsa, were able to maintain some semblance of rule. But in the south the more peaceable inhabitants had been overrun by the Mahrattas and their adherents, who ruled each for himself such amount of territory as his sword could control. On the Sutlej side a similar state of affairs was created by irruptions of Sikhs from the north. The result was constant turmoil; rulers rose and fell; states appeared and disappeared; while the people of the country were prostrate before the exactions of the invaders against whom they could offer no resistance.

Policy adopted.

52. Upon the defeat of the Mahrattas the policy adopted by the British Government was to make the Jumna the limit of British territory and to interpose between that border and the northern powers a buffer of semi-independent states in the ceded territory. A Resident was appointed in Delhi to keep the peace of the border land, interfering as little as possible in the administration of the country. The existing rulers were maintained in their possessions, and, if in any case no claimant could be found, the estate was made over by grant, and assignment or in farm to some deserving soldier or neighbouring chief. The still existing Native States of Pataudi, Dujána and Loháru date from this period. Except in the immediate vicinity of Delhi itself direct administration was sedulously avoided.

1808. Relation with cis-Sutlej Sikhs.

53. The policy of buffer States was seriously endangered by the encroachments of Maharaja Ranjit Singh south of the Sutlej, and the British Government viewed with apprehension the advance of the powerful Lahore ruler towards the British frontier. Some of the Sikh invaders in the country south of the Sutlej had before 1803 become feudatories of Sindhia, and they naturally came under the British suzerainty; but the majority were still outside the scope of British superintendence. An appeal to the British by these cis-Sutlej Chiefs in 1808 was gladly entertained, and by the treaty of Amritsar, signed in April 1809, Ranjit Singh resigned all design upon the States cis-Sutlej, which the British Government undertook to keep intact under its protection, reserving solely the right to escheats.

1810. Reduction of Bhattiana.

54. The raids of the Bhatti chiefs from the west, where they still maintained their independence, had by 1810 become intolerable, and in that year Bahádur Khan was defeated and Fatahabad annexed; the defeat of Zábita

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NOTE.—The administration report for 1892-93 contained a summary of the history of the Punjab under Moghal and Sikh rule and of the incidents of the mutiny which was reproduced in the report for 1901-02. It has now been omitted as the events narrated are matters of general history.

Khan following in 1818. No effort was made to administer the country which was practically left to itself, and encroachments by the Chief of Patiala subsequently became the subject of a long protracted dispute.

1815. Advance in the hills.

55. The defeat of the Gurkhas by General Ochterlony in 1815 brought under British control the hill area south of the Sutlej, which they had overrun. The policy adopted was the same as that adopted in the plains. The hill territories were made over to such chiefs as could substantiate any claim to having ruled in the hills before the advent of the Gurkhas, and the states so established were placed under an Assistant to the Delhi Resident stationed at Subáthu. In the hills this system proved permanent, and the Simla Hill States remain to-day substantially as originally established.

Failure of policy.

56. In the plains it was different. The chiefs established were themselves conquerors and of no long standing. It soon became apparent that the policy adopted must fail. The turbulence of the many chieftains and the impossibility of stopping the kaleidoscope at the point it had reached in 1803 made it hopeless to attempt to secure a settled administration on the desired lines. The treaty with the cis-Sutlej Sikhs was faithfully observed, though it involved the recognition as rulers of chiefs of individual villages or even of confederacies of Sikh horsemen holding villages in shares amounting in some cases to no more than one-twentieth of a single village, and only escheats came under direct administration. In the Delhi Territory confiscations for mismanagement and resumptions on the death of the original grantee very gradually brought to an end the unsatisfactory conditions prevailing. A summary settlement of the land revenue was carried out in each such case and law and order introduced.

1819. Administrative changes.

57. Direct control in the Delhi Territory was exercised at first by the Resident at Delhi, but the constantly increasing area to be administered led in 1819 to the formation of four "divisions" under Principal Assistant Commissioners, who exercised executive control under the orders of the Resident. These four divisions were the beginnings of the present districts of Delhi, Rohtak, Gurgaon and Hissar. Pánipat (now Karnál) was separately established in 1824, and in 1832 these five districts were brought under the Regulations and included in the North-Western Provinces, with which they remained for 26 years. One of the results of this development of the administration was the closer attention paid to affairs in Bhattiána. After a long boundary contention with Patiála the British Government asserted its supremacy over the country upon which encroachment had been made, and a separate district of Bhattiána was established about 1837, subsequently becoming part of the later Sirsa district. These six districts were grouped for administrative purposes into the Delhi and Hissar divisions and were in due course put under regular settlement. They suffered in the famines of 1833-34 and again in 1837-38, especially the districts of Rohtak and Hissar. In the latter visitation relief works were for the first time opened for the able-bodied.

1840. Cis-Sutlej.

58. Meanwhile political control over the Sikh States was exercised until 1840 by the British representative at Delhi and his Assistants, who were also responsible for the administration of the territories which lapsed in default of heirs. In 1840 an Agent to the Governor-General was appointed for the North-West Frontier with head-quarters at Ambála, and in 1842 the administration of the lapsed territories also was transferred to him. At the end of 1846 in consequence of their misconduct during the first Sikh War the most flagrant offenders among the defaulting States were punished by confiscation and the remainder were deprived of their police jurisdiction and of their right to levy customs and transit dues, while the obligation to furnish troops was commuted for a money payment. Nine Chiefs only were exempted from this arrangement and allowed to retain full powers. Of these, Patiála, Nábha, Jínd, Máler Kotla, Faridkot and Kalsía still survive, but Diálgarh lapsed in 1852, Raikot in 1854, and Mamdot was annexed in 1855 in consequence of the misconduct of the Nawab. The head-quarters of the Agent to the Governor-General were transferred to Lahore, where he was entrusted with the duty of reorganising the shattered government of the Punjab, and a Commissioner of

1846.

the cis-Sutlej States was appointed at Ambála. Districts were formed at the same time at Thánesar, Ludhiána, Ferozepore and Ambála out of the lapsed and confiscated territories.

1846. Advance to the Beas.

59. A further consequence of the 1st Sikh War was the cession by the Lahore Government of the area between the Sutlej and Beas in the plains and of Chamba and Kashmir in the hills. No idea of buffer states now remained. The ceded territories became the districts of Jullundar, Hoshiárpur and Kángra under a Commissioner of the trans-Sutlej States at Jullundar, while the Chief of Kapúrthala was maintained in independent possession of his estates in the newly ceded area. In the hills their possessions were secured to the Chiefs of Mandi and Suket. Chamba, which was at first given to Kashmir, was declared independent in 1848. The Kángra State had for some twenty years been in the possession of the Sikhs and in consequence became, as stated, a British district. The Commissioners, cis and trans-Sutlej, were for two years placed directly under the Supreme Government, but in 1848 became subordinate to the Resident at Lahore.

1849. Final absorption of cis-Sutlej districts.

60. It was speedily found that the position of the states, which had been deprived of police jurisdiction, was an impossible one, and in 1849, after the conquest of the Punjab, the British Government assumed complete control, except in the case of the States which had been allowed to retain full powers. The villages were shortly afterwards brought under settlement, and the revenues assessed in cash. The position of the chiefs and of the communities of horsemen (known as pattidars) now became that of ordinary jágirdars or assignees of the revenue demand.

1849. Annexation.

61. On the conclusion of the 2nd Sikh War the annexation of the Punjab was proclaimed on March 29th, 1849, and a Board of Administration appointed consisting of three members, who, although acting jointly in matters of importance, took each a special charge of one of the functions of the Board—political, revenue and judicial. The province, which included the Commissionerships, cis and trans-Sutlej, was divided into seven divisions in charge of Commissioners, with head quarters at Ambála, Jullundar, Amritsar, Lahore, Multán, Ráwalpindi and Leiah (Deraját), embracing 24 districts*. The three additional districts of Pesháwar, Kohát and Hazára, at first administered under the direct control of the Board, were formed into an eighth division about the year 1850. The districts were placed in charge of Deputy Commissioners, who were provided with a staff of covenanted Assistant Commissioners and uncovenanted Extra Assistant Commissioners. The districts again were divided into tahsils or sub-divisions for the collection of revenue, and police circles. The Board was entrusted with plenary authority to control and supervise all departments. The Commissioners were Superintendents of revenue and police, and exercised the civil appellate and the criminal original powers of a Sessions Judge. The Deputy Commissioners were given subordinate civil, criminal and fiscal powers, combining in one person the different aspects of the administration, and thereby much increasing its vigour.

Laws framed and other measures introduced.

62. The first object of attention was to place the revenue system on a sound basis. Settlements made during the regency of the Resident were upheld as temporary measures, and in tracts that had not been previously settled summary settlements to last five years were made, pending the introduction of regular settlements which would endure for from fifteen to thirty years. In the civil courts the rules current in the Sutlej divisions were at first observed, as they were calculated to ensure substantial justice unfettered by technicalities. Subsequently a Punjab Code, embodying much of the customary civil law of the province, was prepared. In criminal law the code adopted during the period of the Residency was maintained. One of the principal duties of the new Government was to develop the resources of the country, to make canals, and, chief of all, to create roads; the latter did not exist, from a civilized

* These districts were Thánesar, Ambála, Simla, Kángra, Hoshiárpur, Jullundar, Ludhiána, Ferozepore, Pákpattan (1852 Gugera, 1865 Montgomery), Lahore, Amritsar, Batála (1852 Gurdáspur), Wazírabad (1852 Gujránwála), Gujrát, Shahpur, Jhelum, Ráwalpindi, Leiah (1861, Bannu), Dera Ismail Khan, Jhang, Multán, Khángarh (1861 Muzaffargarh), Dera Gházi Khan and in 1852 Siálkot.

point of view, in the country when it was taken over. The principal and earliest work of this kind that was undertaken was the construction of the Grand Trunk Road to connect Peshâwar with Lahore. The Bâri Doab Canal was commenced, and many other works of public utility were either projected or undertaken. A strong body of military police under European military officers, comprising six regiments of foot and twenty-six troops of horse, in all 8,100 strong, was raised in aid of the civil police, the establishment of which was of the strength of 6,900 men of all grades. The military police furnished guards and patrolled the country, and acted in the prevention of crime and apprehension of offenders, while the civil police, who were under the charge of the civil officers, were entrusted with the detection and prosecution of criminals, and the duties of watch and ward in towns and villages. The general disarmament of the part of the province lying between the Indus and the Sutlej was carried out. (The cis-Sutlej divisions and the territory round Delhi were disarmed at a later date.) In all 119,700 arms of all descriptions were seized or surrendered. The sale, possession or manufacture of arms and ammunition, except in the trans-Indus tracts, was prohibited. In the frontier districts it was of course necessary to leave the people armed, in order to enable them to cope with their marauding neighbours of independent territory. With regard to these, special military measures were undertaken. The forts at the principal stations were repaired or rebuilt upon more scientific principles, a chain of fortified border posts was dotted along the whole length of the border line, parallel to which a military road was made with cross branches connecting it with the internal net-work of communications being established in the province. A special force, the Punjab Frontier Force, under the direct orders of the Board, was raised for service, normally on the frontier, and only in special cases elsewhere. It consisted, at first, of five regiments of cavalry, the Corps of Guides, five regiments of infantry, three light field batteries, two garrison batteries, two companies of sappers and miners, and the Sind Camel Corps. Mule batteries were afterwards entertained in the Frontier Force, in place of the field batteries; the sappers and miners were withdrawn, and a Gurkha regiment was added to the force. A few years after annexation the Camel Corps was changed into a regiment of infantry. The later history of the Frontier Force pertains to the administration of the North-West Frontier Province.

Further improvements carried out.

63. The work of reclaiming the country, of civilizing its people, and of developing its resources was carried on without interruption for the next seven years. The Punjab became gradually covered with the institutions of modern civilization; roads were made in every direction; canals were projected or constructed; schools, dispensaries and jails were erected in every district; a uniform code of civil and criminal law and procedure was adopted; the currency was reformed; taxation on trade was removed; and a system of regular settlements was commenced, which was designed ultimately to embrace the whole province, and in the course of which the *status* of all classes connected with land, the shares of the produce one class could demand from the other, and the portion which was due to Government, were accurately defined and recorded.

1853. Sir John Lawrence, Chief Commissioner.

64. In 1853 the Board of Administration was abolished, and in its place Sir John Lawrence was appointed the first Chief Commissioner, as the head of the local executive administration, with control over the Punjab Frontier Force. Subordinate to him were appointed a Judicial and a Financial Commissioner, who were the chief authorities in the Judicial and Revenue Departments, respectively. The Judicial Commissioner was also head of the police: he supervised educational operations and superintended the control of Local and Municipal Funds. Among other measures, the following are principally noticeable as having been carried out during 1853:—The addition of another battalion to the military police, raising it to a strength of 7 battalions of infantry and 27 troops of horse; the virtual extermination of thaggi, and the employment as organized bodies of labourers of the Mazbi Sikhs, among whom this crime was prevalent; the introduction, or rather re-imposition, of

octroi duties in all towns and large villages in lieu of a house-tax with the full preference of the inhabitants; a determined effort to put down female infanticide which found expression at a great assembly of all the leading Chiefs and native gentlemen of the province at Amritsar, when rules with a view to diminishing marriage expenses were accepted by those present and promulgated for general observance; and, lastly, the introduction of tea cultivation in the Kángra district, and extensive operations in arboriculture, nearly a million trees being planted in two districts alone. Including all the necessarily large expenditure consequent upon the annexation of a province in the condition in which the Punjab was found to be when taken over, the financial results of the administration showed a surplus in 1851-52 of seventy-three lakhs of rupees, and in 1852-53 of thirty-five and three-quarter lakhs.

1857. The Sepoy mutiny, and measures taken.

65. The next three years from 1853 to the close of 1856 constitute a period of consolidation, during which the measures originated in the earlier years were completed or perfected. No events in the internal history of the province call for special notice, except that the construction of a railway from Multán to Amritsar was under consideration, when the outbreak of the mutiny put aside, for a time, that and many other schemes for the improvement of the country. The story of the mutiny and the part in it played by the Punjab have now become matters of history. It will be sufficient to notice briefly the subsidiary measures in aid of the military operations for the suppression or prevention of the rising in the province. Civil officers were immediately empowered to try and punish summarily, even with death, offences affecting the public tranquillity; a strict but judicious censorship was maintained over the native press; all letters addressed to sepoys were opened, and much curious and valuable information was thereby obtained. All treasure was concentrated at places where a European guard could be obtained. The ferries over the five great rivers of the Punjab were guarded with special care, and the country was thus divided into blocks of territory insulated from each other. All Hindustanis without employment were deported out of the Punjab, and mendicants and roving fakirs coming from the east were turned back. The cis- and trans- Sutlej divisions were disarmed, 69,000 stand of arms being given up by the people. These divisions had not been included in the disarmament of the rest of the Punjab which took place in 1849. A few months later the Delhi and Hissar divisions were also disarmed, 225,000 arms being taken by the police in addition to forty cart-loads of arms from the city of Delhi. The principle of recovering the value of plundered property from the persons, villages or towns implicated, by means of fines, was everywhere rigidly enforced. Lastly, the active co-operation of the people in the extirpation of the mutineers was secured by paying a reward of Rs. 50 for every mutinous sepoy delivered up alive, the captors being permitted to retain any property found on the person of the mutineer. The effect of this order was to place the Hindustanis as soon as they left cantonments among a nation of enemies. The financial position of the province was a difficult one: all remittances from Calcutta were cut off, the demands of the besieging army before Delhi were large, and it took some time for money from Bombay to reach Lahore. A loan, producing 41 lakhs of rupees, was therefore raised: it served as a useful index to the state of public opinion.

1858. Events subsequent to the mutiny.

66. The next few years after the mutiny were devoted to restoring order and to taking up the task of progress which had been temporarily suspended. In February 1858 the divisions of Delhi and Hissar were formally incorporated in the province of the Punjab, adding six to the twenty-seven original districts. The Thánesar district, however, was broken up in 1862, and divided between Ambála and Karnál (Pánipat). The division of the province into ten divisions and thirty-two districts continued for 22 years unchanged. In August of 1858 two disarmed native regiments at Multán revolted owing to misapprehensions of the intention of Government towards them. They were pursued and all of them either captured or killed. This was the last outburst of the mutinous spirit in the native army. The Hindustani regiments that were disbanded at Mián Mir and elsewhere were sent to their homes. Other military measures were the transfer to the Bengal Army of four regiments of cavalry and

seventeen of infantry raised in the Punjab during the mutiny. A regiment of Gurkhas was formed from men of this class in the Punjab Infantry and the Police Battalions, and added to the Punjab Frontier Force. Rewards in the shape of grants of territory were made to the Chiefs of Patiála, Jínd and Nábha for the services rendered during the preceding year; and a large estate in Oudh was conferred upon the Raja of Kapurthala.

1859. Constitution of Lieutenant-Governorship. Sir R. Montgomery.

67. At the commencement of 1859 the Punjab, together with the Delhi Territory, was placed under a separate Lieutenant-Governor. Sir John Lawrence was the first to hold the office; after a brief interval he resigned and left the province, with the administration of which he was so intimately connected ever since its annexation to the British Empire, and was succeeded by Sir Robert Montgomery. The year is remarkable for the commencement of the first railway in the Punjab from Amritsar to Multán (on the 8th February 1859), and for the admission of water into the Bári Doab Canal. The year 1860 was marked by a severe famine which afflicted the districts south of the Sutlej. Efforts were made to relieve the starving population, but there was great mortality. The districts along the Rájpútána border felt the effects of the famine most severely. The following years demand little remark on account of events of special importance; the resources of the country were quietly developed, and steady progress made in every branch of the administration. In 1860-61 the police were reformed, the military and civil branches of this force were amalgamated and placed under the orders of an Inspector-General. In 1862 the Penal Code was introduced in the Punjab. During these two years much was done to assimilate the government of the Punjab to that of the older provinces of British India. Special courts for the trial of civil suits were established, civil and criminal jurisdiction was conferred on some of the principal jágirdars as Honorary Magistrates, taxation was imposed on the non-agricultural classes, and the land revenue system was framed on that of the North-Western Provinces. The conservation of the timber forests on the slopes of the Himalayas was taken in hand, the preliminary surveys and reports being made in 1861-62. The first exhibition of arts and manufactures in the Punjab was held at Lahore in this year.

1865. Sir D. McLeod.

68. On the 10th January 1865 Sir R. Montgomery resigned the Lieutenant-Governorship of the province, and was succeeded by Sir Donald McLeod. In the same year the office of the Judicial Commissioner was abolished, and a Chief Court, consisting of two judges, was created by Act XXIII of 1865. In that year also the appointment of Settlement Commissioner of the Punjab was created, and Mr. E. Prinsep was the first to hold that office. Henceforth the internal history of the province, though always marked by some special features of its own, is practically that of the remainder of British India. In 1865 disturbances in Baháwalpur, and the simultaneous death of the Nawab, compelled the interference of Government, and the State was placed under the care of a Superintendent. In 1867 special efforts, which have not proved successful, were made to encourage trade with Yárkand and Káshgar. The eastern and southern parts of the province were visited by a severe drought in 1868-69, which culminated in a famine in the tracts to the south of the Sutlej. Relief works were promptly undertaken in the Jullundar, Lahore, Hissar and Delhi divisions, in the two latter on an extensive scale; the number of persons that received relief in these divisions from January to May 1869 being 2,100,000. Rain fell in March 1869, and for a time matters looked better, but the rainfall throughout 1869-70 was unseasonable, and the drought continued with increasing severity. But for a copious fall of rain in September, a famine more terrible than the famine of 1783, which is still remembered, would have devastated the country. Owing, however, to the timely adoption of further measures of relief, the exertions of all officers and the co-operation of the wealthier classes, the people were saved from starvation, and were subsequently helped to recover from the calamity by advances of money and liberal remissions of revenue. The famine was, as usual, attended by sickness. Small-pox and cholera prevailed to an alarming extent during the year.

1870. Sir H. Durand 1871. Sir H. Davies.

69. In June 1870 Sir D. McLeod retired from the office of Lieutenant-Governor and was succeeded by Sir Henry Durand, who met with a fatal accident seven months afterwards. His successor was Sir Henry Davies. The year 1871-72 was one of considerable legislative activity for the Punjab. The provisions contained in the Punjab Civil Code and in various Bengal Regulations and administrative rules and orders were consolidated and re-enacted in the Punjab Laws Act. An Act (since superseded) was passed for the collection and settlement of the land revenue ; and the Canal and Drainage Act codified the rules regarding irrigation in the province. Special legislation was adopted to control the criminal tribes which are found in some strength in the Punjab, and some other measures were passed which have since been superseded. The experiment of employing prisoners on extra-mural labour at Rúpar on the Sirhind Canal work was commenced in this year. In January 1872 a band of Kúka fanatics caused a disturbance in Máler Kotla, which had been preceded by the murder of some Muhammadan butchers at Amritsar in August 1871. Repressive measures were promptly taken, and the ring-leaders were exiled. In 1874-75 the first step was taken towards the separation of the judicial and executive functions, which, as explained above, had been combined in the persons of district officers ever since the annexation of the province. In January 1876 His Majesty King Edward VII, then Prince of Wales, paid a visit to the Punjab. The year 1877 was marked by the Imperial Assemblage, and the gathering of all the Punjab Feudatories at Delhi in common with the other Chiefs of India. Unseasonable weather in 1877-78 caused considerable anxiety. A scarcity was experienced in the districts of Karnál, Hissar and Delhi, where special measures of relief had to be organized, and works were undertaken for the relief of the starving population.

1877. Sir R. Egerton.

70. In April 1877 Sir Robert Egerton succeeded Sir H. Davies as Lieutenant-Governor of the Punjab. In November 1878 the war with Amir Sher Ali Khan commenced, and the resources of the province were fully taxed, as it formed practically the base of operations for the armies operating in Northern Afghánistán. In the earlier phase of the war contingents from the States of Patiála, Baháwalpur, Jínd, Nábha, Kapurthala, Faridkot and Náhan joined the British force, and performed excellent service. The years during which the war lasted, from November 1878 to the end of 1880, were marked by some scarcity, owing to deficient rainfall and considerable sickness, and trade towards the west was affected by the military operations, but these called everywhere for increased labour, and large profits were made by many sections of the community, while the simultaneous construction of the railway towards Pesháwar, which was pushed forward with much energy, afforded ample employment to the needy. On the termination of the war a Viceregal Durbar was held at Lahore by the Marquis of Ripon, at which all the ruling chiefs and principal native gentlemen of the province were present. In 1877 Kashmir, which had hitherto been under the provincial administration, was taken under the control of the Supreme Government. Towards the close of the administration of Sir R. Egerton, the second Punjab exhibition of arts and manufactures was held at Lahore.

1882. Sir C. U. Aitchison.

71. Sir Charles Aitchison, who succeeded as Lieutenant-Governor, assumed charge of office in the spring of 1882. During the early years of his administration the Punjab University was created, and the policy of local self-government was introduced or extended by the District Board and Municipal Acts which then became law. A net-work of railways, which left few portions of the province in a position of isolation from the sources of food supply, was gradually completed, and almost the whole of this was amalgamated under a single administration as the North-Western Railway in 1885-86. Portions of the arid Ferozepore, Multán and Montgomery districts were protected by new or improved inundation canals. The Sirhind Canal, opened in November 1882, was extended to irrigate large areas in British territory and Native States south of the Sutlej, while another portion of the same thirsty tract was also provided with a supply by the extensions of the Western Jumna Canal scheme known as the Sirsa Branch. The area watered by the Bári Doab Canal was considerably enlarged ; and the completion of the second stage of the

Chenab Canal project opened up the greater portion of the Rechna Doab to colonization. All these measures were aimed at guaranteeing the Punjab as a whole from a repetition of the famines of the past. In 1885 the meeting between His Excellency Lord Dufferin and His Highness the Amir of Kábul at Ráwalpindi, and the incidents which occurred outside India at that time, evoked a marked display of loyal and warlike feeling in the province, and the offers of services then made by the ruling chiefs of the Punjab resulted later in the formation of the Imperial Service Corps. During the following year Sir C. U. Aitchison served as President of the Public Service Commission, the recommendations of which have since led to various administrative reforms and to the introduction of the Provincial Service. The last work of his administration was to organize the foundation of the Aitchison (Chiefs') College at Lahore to provide a special education for the sons of the leading families of the Punjab.

1887. Sir J. B. Lyall.

72. Sir James Lyall succeeded as Lieutenant-Governor in April 1887. During the summer of that year the important Acts which now regulate the land revenue and land tenures of the province, recognising the new system of continuous inquiry and record of agricultural facts, and which had been prepared under Sir C. U. Aitchison, became law, and in accordance with the wishes of the Government of India, a number of districts were at once put under settlement. The expeditions undertaken in 1888, 1891 and 1892 against the Black Mountain tribes and in 1891 against the Sámil Orakzais belong to the history of the North-West Frontier Province. In 1887 the special laws already in force in the frontier districts for the repression of crime were extended by a new Regulation empowering Deputy Commissioners in cases where judicial proof is deficient to pass sentences of imprisonment on the verdicts of Councils of Elders up to a maximum of seven years for murder and other heinous offences. In November 1887 His Excellency the Viceroy of India, Lord Dufferin, visited Dera Gházi Khan and bestowed khillats on certain native gentlemen in Durbar. In the spring of 1890 the province was honoured by a visit of His Royal Highness the late Duke of Clarence, who laid the foundation stone of the Jubilee Museum building at Lahore, and in the following year His Imperial Highness the Czarevitch also made a brief stay in the Punjab. His Excellency the Viceroy paid a visit to Patiála in October 1890 and confirmed the Maharaja in the full powers of the ruler of his State; and the Raja of Kapurthala was invested with the same powers by the Lieutenant-Governor shortly afterwards. Previous to this the Imperial Service Corps of the leading Native States had been thoroughly reorganized and formed into a body of efficient troops. The returns of the census of 1891 showed the extraordinary impulse to the growth of population which the peace and partial immunity from pestilence and starvation of the preceding years had given and fears were entertained that the growing numbers might in some tracts soon begin to press on the limits of subsistence in spite of the provision of new fields for industry. In 1891 a locust plague brought portions of the Ráwalpindi and Jhelum districts within reach of famine, and both 1890 and 1892 were marked by destructive visitation of fever, beside which even the cholera of the latter year with its 50,000 deaths sinks into insignificance. During 1890—1892 various measures of improvement involving a considerable expenditure were carried out in the Police and Jail Departments, and large sums were spent upon providing additional and improved accommodation in central jails. Crime, which, owing to many causes, had shown a serious development up to 1888, slowly declined in subsequent years. In 1891 effect was given to the proposals of the Punjab Government for strengthening the hands of the Deputy Commissioners of frontier districts in the discharge of their political duties by the appointment of special Political Assistants, and the addition was made to the staff of officers of the Dera Gházi Khan district of a 1st class Assistant District Superintendent of Police and a Political Tahsildar. The scheme for the revision and distribution of the new force of Border Military Police received the sanction of the Government of India in May 1892. At this period provincial finances were at a very low point, and except during the last two years of Sir James Lyall's administration the want of money constantly

necessitated the postponement of important works. Among the buildings of note added to the province within the period are the Chief Court, the Lady Aitchison Hospital and Lady Lyall Training Home, of which the foundation stones were laid by Their Excellencies Lady Dufferin and Lady Lansdowne, the Aitchison (Chiefs') College, the Jubilee Museum and the Albert Victor Memorial Wing of the Mayo Hospital. The most important engineering work of the time was the construction of the weir for the Chenab Canal, with which the development of water-works at Ráwalpindi, Delhi and other less important places is worthy of mention.

Pacification of the Baluchistan Border Tribes.

73. The decade 1882—1892 saw a remarkable advance in the pacification of the tribes lying to the south of the Gomal Pass. During the early years the occupation of Quetta, Peshin and Thal-Chotiáli continued to contribute materially towards the establishment of an effective control over the hill clans on the Lower Deraját border, all cases between these tribes and those under the Agent to the Governor-General in Balúchistán, to whose charge the Khetráns were transferred in 1882-83, being settled at conferences held at Sibi and Fort Munro. The result of these meetings was that crime was suppressed, blood feuds kept under control and relations between the tribes themselves were maintained on a satisfactory basis. Since 1890, when the political control of the Balúchistán Agency was extended over the Zhob Valley, the whole aspect of affairs has become changed, direct influence having been brought to bear on the hill country from both sides. By a notification of the Government of India, issued in November 1889, the jurisdiction of the Deputy Commissioner of Dera Gházi Khan and the Commissioner of the Deraját (at the present day of Multán) was extended over the hill country of the tribes adjoining that district, who had hitherto been under their political control only, from the boundary of the district on the south to the boundary of the Bozdár tribe on the north. This measure has proved to be one of unqualified success and has materially contributed towards efficient tribal management on that part of the border; and it has since been extended to the Bozdár country also. Many burning inter-tribal boundary disputes have been settled with excellent effect.

1892. Sir D. Fitzpatrick.

74. Sir James Lyall's term of office expired in March 1892 when he was succeeded as Lieutenant-Governor by Sir Dennis Fitzpatrick. Agricultural conditions were prosperous until the year 1895, and there was a bumper rabi harvest in 1893. The monsoon terminated early in August in 1895, and there was a poor kharif harvest followed by a deficient spring crop in 1896. The almost complete failure of the monsoon in the latter year caused widespread scarcity not only in the Punjab, but also in many other parts of India, and grain was procurable only at very high prices. The whole of the Delhi division, except Simla, was affected, and also parts of the Jullundar, Lahore and Ráwalpindi divisions. Famine relief works had to be undertaken on a large scale, the relief afforded being reckoned at 22½ million day-units and the maximum number under relief on any one day being 127,758. Hissar was the most distressed tract and accounted for one-half of the total number relieved. The cost of relief operations was Rs. 22⅔ lakhs, revenue to the amount of Rs. 22 lakhs was suspended, and loans for the purchase of seed and cattle were granted to the amount of Rs. 11½ lakhs at the conclusion of the famine. From the Charitable Relief Fund subscribed in England and in India Rs. 12½ lakhs were allotted to the Punjab to meet claims beyond the scope of State aid. The active colonisation of the Rechna Doab began in 1892 and led to the enactment of the Government Tenants (Punjab) Act (III of 1893), simplifying procedure and defining the status of the new colonists. The effect of the food supply raised on the newly allotted lands in mitigating the severity of famine was already apparent in the visitation of 1897, and is prominently noticed in the official history of that famine. Lyallpur, the head-quarters of the colony, in whose name is perpetuated the memory of the Lieutenant-Governor under whose auspices the colonisation scheme was matured, was founded in 1896. The constitution of the Provincial Civil Service, noticed in the next section, was effected in 1893. In consequence of the framing of the Durand Agreement in 1893 affairs on the frontier continued to absorb the energies of the Punjab Government, as within the scope of its political control fell the

delimitation of the sphere of British and Afghan influence, the expedition of 1894-95 against the Mahsud Waziris, the Chitrál Relief Expedition of 1895, and the general rising of the Pathan tribes from the Swat Valley to the Kurram in 1897. The first ruling chief in the Punjab to visit Europe was the Raja of Kapurthala, who did so in 1892, spending the summer of 1893 there. The Raja's grandfather died when on his way to pay a visit to England. The visit of the Viceroy (Lord Elgin) to Lahore in November 1894 was the occasion of a durbar in which the principal ruling chiefs were assembled together. The name of Sir Dennis Fitzpatrick will always be associated with the completion of the Kángra and Kulu Forest Settlements, a legacy of his predecessor, which his untiring energy and legal acumen enabled him to bring to a satisfactory conclusion.

1897. Sir Mackworth Young.

75. On the retirement of Sir D. Fitzpatrick in March 1897 Sir William Mackworth Young became Lieutenant-Governor, and was at once confronted with the Pathan revolt. The story of that rising and of the Mahsud blockade of 1900-01 belong now to the history of the North-West Frontier Province. The Patiála Lancers, the Patiála, Jínd, Nábha and Kapurthala Infantry, and the Sirmúr and Máler Kotla Sappers all took part in the operations on the frontier in 1897 and 1898. All the ruling chiefs also came forward with offers of assistance in connection with the war in South Africa, which elicited a most noteworthy display of loyalty on the part of the whole of the Punjab. The deaths of the Chiefs of Farídkot and Sirmúr occurred in 1898, of Baháwalpur, Pataudi and Jubbal in 1899, of Patiála in 1900, and of Keonthal in 1901. The deaths of the Maharaja of Patiála and the Nawab of Baháwalpur terminated long periods of misrule and reckless expenditure in each case, and both States were placed under management, the former by a Council of Regency, the latter by a British Superintendent. A Political Agent was appointed in 1901 for the control of the political relations of the Punjab Government with the three Phulkián States of Patiála, Jínd and Nábha. The kharif harvest of 1897 and the rabi harvest of 1898 were all that could be desired, but the kharif harvest of the latter year was poor, and when in 1899 the monsoon came to an untimely end famine was again in the land. There was a very great scarcity of fodder, and the mortality among cattle was immense; and the distress among the people affected was more intense than in 1896-97. The maximum number relieved on any one day was 243,000 (reached in March 1900) and the total relief afforded is reckoned at 52 million day-units. The cost of relief operations was Rs. 48 lakhs, the land revenue suspended amounted to Rs. 44 lakhs, and loans aggregating Rs. 19 lakhs were granted for the purchase of seed and cattle when favourable rains occurred in the autumn of 1900. The Charitable Relief Fund formed on this occasion allotted Rs. 12 lakhs for the wants of the Punjab. Hissar was, as before, the most deeply affected tract, and accounted for two-thirds of the number of persons relieved. The other tracts afflicted in 1896-97 suffered again in 1899-1900 and some other districts in addition. The relief measures undertaken were effectual in preventing death from actual starvation, but it was inevitable that the hard conditions of life should lead to an increased mortality, especially among the very young and the very old, and the number of deaths was in Hissar three times and in Rohtak twice the average number. In the other affected districts the normal was exceeded by varying proportions, all under 50 per cent. The gloomy anticipations raised by the failure of the kharif harvest of 1901 were happily not fully borne out. The conditions did not amount to a famine, though severe scarcity prevailed. Test works were opened in Hissar and gratuitous relief afforded. The aid given was gratefully recognized by the people as going far to preserve the stability of the district. Plague first appeared in October 1897 in the Jullundar district, whence it spread to parts of Hoshiárpur and of the Kapurthala State, disappearing in the spring of 1898 after causing 2,116 deaths out of 3,412 cases. It re-appeared in the same area in the winters of 1898-99 and 1899-1900, disappearing as before in the hot weather seasons. In the winter of 1900-01 the disease extended to the districts of Siálkot, Gurdáspur, Ludhiána, Ferozepore and Ambála, and in the following cold weathers the visitation became general. In the early stages of the disease

a fairly successful attempt was made to confine it to the locality of origin by an elaborate cordon. This was removed when in 1900 the Government of India formulated their plague policy in which such cordons were condemned. The disease then spread rapidly over the province. The constitution of a Legislative Council for the Punjab in 1897 is more particularly noticed in Chapter III. The chief enactments of the early years of the Council's existence were the Riverain Boundaries Act (I of 1899), the Chos Act (II of 1900), and the Descent of Jagirs Act (IV of 1900). The important Alienation of Land Act (XIII of 1900) was passed in the Imperial Legislative Council. During the winter of 1900-01 the Horse and Mule Breeding Commission made its inquiry and submitted recommendations which have led to important administrative changes in the Punjab in connection with the subject of the inquiry. The census taken on March 1st, 1901, showed the increase as compared with the population in 1891 as 6·85 per cent. for British territory and 3·78 per cent. for Native States, and disclosed the effect of the colonization of the Rechna Doab on the growth of population in the province as a whole. The creation of a new food-supply stimulates the birth-rate and minimises the retarding effects of scarcity, but colonization does not otherwise involve a special and abnormal increase of population, as all the colonists come from other districts within the Punjab and are not immigrants from without. On the population statistics of particular districts, however, the immigration to the Chenab Colony produced notable results.

Separation of North-West Frontier Province.

76. The creation of a new administration (the North-West Frontier Province) for the management of the political affairs of the North-West Frontier was proclaimed on the 25th October 1901. Under this proclamation the districts of Hazára, Pesháwar and Kohát, the Bannu and Marwát tahsils of Bannu district, and the Tánk, Kuláchi and Dera Ismail Khan tahsils of Dera Ismail Khan district, with a total area of 13,077 square miles, a population of 2,050,724 and an assessed land revenue of Rs. 21,56,400, ceased to form part of the province. The reasons for the separation of the Pathan districts from the Punjab concerned the management of political relations with the trans-frontier tribes. It having been decided that these relations should be brought under the direct control of the Government of India, the intermediate authority of the Punjab Government being eliminated, it followed, as the only practicable arrangement, that there should be placed under the same control and authority the civil administration of the areas within our border occupied by Pathan tribes, who are connected with the trans-frontier Pathans by tribal and family ties, as well as by trade and other relations, both friendly and hostile, arising out of propinquity and inter-migration. *Pari passu* with this change a re-arrangement of divisions and districts in the Punjab became necessary. Of the old Deraját commissionership the districts of Dera Gházi Khan and Muzaffargarh, nearly two-thirds of the Dera Ismail Khan district, and nearly three-fifths of the Bannu district remained with the Punjab. These latter portions were, with the exception of 412 square miles, added to Dera Gházi Khan, formed into the new Miánwáli district: and these districts of Dera Gházi Khan, Muzaffargarh and Miánwáli, together with the districts of Multán and Jhang previously included in the Lahore division, were constituted a new commissionership of Multán. In exchange the districts of Siálkot and Gujránwála were transferred to the Lahore division from Rawalpindi, which retained four districts only. As the immediate result of the rearrangements following on the creation of the new province the Punjab consisted of 5 commissionerships and 27 districts.

1902. Sir Charles Rivaz.

77. Sir Charles Rivaz succeeded Sir Mackworth Young as Lieutenant-Governor in March 1902. In December of the same year the Coronation Durbar, held in honour of the accession of His Majesty King Edward VII, took place at Delhi. In common with the Native Chiefs of India generally, certain selected Punjab Chiefs attended, and during the Durbar the Kaur Sahib of Patiála had the honour of receiving the K. C. S. I. and the Raja of Nábha the G. C. I. E., and the latter was appointed Honorary Colonel of the 14th (Ferozepore) Sikhs. The Punjab was honoured in the cold weather of 1905-06

by the visit of His Royal Highness the Prince of Wales (now His Majesty King George V), who was entertained at Delhi, Amritsar and Lahore. Most of the Chiefs attended at the ceremonies held in connection with the visit. The Legislative Council continued to exhibit great activity, and from its deliberations eventuated certain important Acts of which may be mentioned the Military Transport Animals Act (I of 1903), the Court of Wards Act (II of 1903), the Pre-emption Act (II of 1905), the Minor Canals Act (III of 1905), the Land Alienation Amendment Act (II of 1907), and the Colony Bill of 1907 which was open to misconception and led to considerable agitation, owing to which the assent of the Governor-General was eventually refused.

On the 4th of April 1905 the hill country round about Kángra was devastated by a disastrous earthquake which levelled to the ground nearly every building within an area of 700 square miles, and in which twenty thousand souls perished. Among the killed were 25 out of the 76 European inhabitants of Dharmsála, including nearly the whole civil staff, and 112 of the 7th Gurkhas. No time was lost in pushing up relief parties from the plains, and in a week medical relief stations had been established at five centres; in a fortnight the treasuries were opened, and the machinery of Government was once more in motion. For the relief of distress consequent on the destruction of property generous provision was made by Government: revenue and taxation were remitted, irrigation channels repaired, and grants of timber for the rebuilding of houses, and liberal advances of money were made: and at the same time private charity contributed over Rs 13½ lakhs for the relief of distress which lay beyond the province of Government to provide for.

Death was very active among the Punjab Princes. The Raja of Mandi died in 1902, Raja Sham Singh of Chamba, who had abdicated in 1903, in 1905, Raja Balbir Singh of Faridkot in 1906, and the Nawab of Bahawalpur in the same year. The colonization of the Jhelum Colony was undertaken in 1902 and the construction of buildings at Sargodha, the head-quarters, began in the same year. In the Chenab Colony active allotment ceased by the end of 1904. Increasing attention began to be paid to the educational needs of the province and an exhibition was held in 1903 which proved useful and stimulating. The abolition of the middle school examination took place in the same year. Conferences on commercial education, female education and departmental work were held in 1904 and 1905, and were fruitful in results. The districts of Lyallpur and Attock were constituted in 1904 and in the same year four extra temporary Judges were appointed in the Chief Court and the fifth Judgeship was converted into a permanent appointment. The Irrigation Commission (1901-03), Police Commission (1902-03) and Survey Commission (1904-05) conducted their inquiries in the province and, as a result of the first-named, what is known as the Triple Project received the sanction of the Secretary of State in 1904. Under this scheme the surplus water of the Jhelum river is used to supply in part the existing Lower Chenab Canal, thereby setting free an equal amount of water for the irrigation of the Upper Rechna and Lower Bari Doabs. The recommendations of a previous inquiry materialized in 1903 when the Army Remount Department took over from the Civil Veterinary Department the control of horse and mule breeding operations in the "selected" districts of the province. For the development of Co-operative Credit Societies, a Registrar was appointed in 1903, and the movement, which has since made most satisfactory progress, was placed under efficient guidance. Further attention to the needs of the agricultural population led to the organisation in 1905 of the provincial Agricultural Department, under a Director of Agriculture with a staff of trained experts, and the construction of the Lyallpur Agricultural College and Research Institute was taken in hand. The assistance of the new department was at once invoked when boll-worm appeared in the autum of 1905 and almost wholly destroyed the cotton crop of the Central and South-West Punjab. Among the public works executed at this period may be mentioned the Accountant-General's Office, the Public Works Department Secretariat, the new Senate House and educational offices, and the improvement of the Lahore Mall.

1907. Sir D. Ibbetson.

78. Sir Denzil Ibbetson, who had previously officiated as Lieutenant-Governor of the province from April to October 1905, during the absence on leave of Sir C. Rivaz, finally took charge on March 6th, 1907: but was compelled to take leave from May to August of that year to submit to an operation in England for the fell disease which compelled his retirement in January 1908, and to which he succumbed less than a month afterwards. Sir Thomas Gordon Walker held temporary charge on the occasion of both vacancies. It was Sir Denzil who was called upon to deal with the political unrest in the early summer of 1907, which manifested itself in riots at Lahore and Ráwalpindi, in seditious articles in certain newspapers, and in more overt acts calculated to discredit Government, such as the fouling of wells. The unrest was due partly to the prevalence of plague and high prices and partly to agitation against certain measures of Government, such as the Colonization Bill and the proposed enhancement of the occupiers' rates on the Upper Bári Doab Canal. It was found necessary in May 1907 to deport two of the agitators under Regulation III of 1818. As a result of this measure, of prosecutions in connection with the riots, and of legislation dealing with public meetings of a seditious character, the feeling of unrest had by the autumn considerably abated, and in November the deported agitators were released. The Colonies Committee was convened in the autumn of 1907 to consider the whole question of the future management of the Canal Colonies in the Punjab, with particular reference to the grievances alleged against the policy underlying the recent legislation of the Provincial Council. The report was submitted to the Local Government in 1908. During 1907 the epidemic of plague reached its culminating point and recorded deaths from the disease amounted to the appalling total of 608,685.

1908. Sir Louis Dane.

79. The office of Lieutenant-Governor was assumed by Sir Louis Dane from Sir Thomas Gordon Walker on May 25th, 1908. The resources of the province had been greatly depleted by the formation of new districts and by the demands of the colony administration, of the police reorganization, of agriculture, and of education, and it became necessary to institute a period of retrenchment and to insist on punctual realization of the land revenue demand in the collection of which the previous years of scarcity had encouraged some laxity. More efficient control of the provincial finances has resulted from the appointment of a Financial Secretary to Government, which, with the addition of a 2nd Financial Commissioner, became possible on the reduction in 1910 of the appointments of the Settlement and Excise Commissioners. In 1911 modifications were introduced in the Provincial settlement by which many of the fixed assignments, granted by the Government of India since the last settlement to cover the cost of administrative changes subsequently ordered, were abolished and instead an increased proportion of certain shared heads of revenue was allotted to the province. By this change, after three years of argument, the objection that these expanding charges could not fairly be met by a fixed income was accepted and some illiberality in the original settlement itself was recognised and removed. The year 1909 was a notable one in the constitutional history of the province owing to the important changes in the constitution and procedure of the Legislative Council effected under the scheme of reform relating to the whole of India which had been under discussion for the past three years. The first meeting of the enlarged Council took place on January 3rd, 1910. The measures which have since been placed on the statute book include the Punjab Municipal Act (III of 1911) and the Amendment Act (I of 1912) of the Punjab Courts Act, bringing the law of civil appeal in the Punjab more into line with the law prevailing in other provinces. The Civil Panchayats Bill also, a measure to facilitate the establishment of village civil tribunals, reached its final stage. The growing needs of the province resulted in the appointment in 1909 of four new Sessions Judges (two of the appointments being "listed" for the Provincial Service). By these additions the number of Civil and Sessions divisions was brought up to 16 (exclusive of Kulu) and a long acknowledged insufficiency to some extent redressed. Important territorial changes have been frequent. In 1909, to relieve the overworked Lahore division, the district of Montgomery was transferred to the Multán division, and the Miánwáli district

in turn transferred from Multan to Rawalpindi, leaving behind, however, the Leiah tahsil which was incorporated in Muzaffargarh district. In 1910 the Sámpla tahsil of Rohtak district was abolished and its area divided among the three remaining tahsils, and in the same year, to relieve the heavy Lahore district, Sharakpur tahsil was transferred to Gujránwála district. Lastly, in 1911 the villages of Bhera tahsil of Shahpur district which are to receive irrigation from the Upper Chenab Canal were transferred to the Phália tahsil of Gujrát. Among the native princes the deaths in 1911 of the venerable Raja Sir Hira Singh of Nábha and the Raja of Mandi have to be recorded. Sir Bhupindra Singh was formally invested as Maharaja of Patiála in September 1909. Except for a severe visitation of malaria in 1908 and the continued presence of plague the general health has been good. Sanitation has increasingly occupied the attention of the administration, but makes little headway in the country districts: among the measures taken the appointment of Health Officers at Simla, Lahore and Amritsar has been fruitful in good results.

Agricultural conditions have been prosperous. The important wheat harvest has been good in each year, that of 1909-10 having been particularly favourable. The autumn harvests have been less successful, drought having had an unfavourable effect in 1911-12. Abnormal cold in 1910-11 and again in 1911-12 did some damage to the cotton and sugarcane crops. The co-operative movement continues to expand and the principle has taken firm root among the agricultural community. The Punjab Agricultural College at Lyallpur was opened in 1909 and an agricultural station for the submontane tract was started at Gurdaspur in 1910. In another direction the application of science to the needs of the country people has been advanced by the development of the Civil Veterinary Department, whose efforts to prevent and cure disease among live-stock have met with a ready welcome. The investigation of the possibilities of water storage where the great rivers leave the hills and on some of the Salt Range streams has led to the development of several promising schemes which will, if anticipations are realised, greatly add to the area under irrigation and steady the supply to existing cultivation. The simplification of settlement procedure has done much to reduce the inconvenience caused by the periodic reassessment of the land revenue demand. Nor have industries been neglected. The appointment of a Director of Industries ensures sustained effort on the part of Government to co-ordinate industrial enterprise and to collect and diffuse industrial knowledge. Resin distillation has already proved that there is a great future before the enterprise, and hope is entertained of the successful exploitation of the bamboo and spruce and silver fir forests for the manufacture of wood pulp. A comprehensive survey of the industries of the province ordered by the Local Government resulted in the publication of "The Industrial Punjab" in 1911.

In no part of India have the outbreaks of plague been more severe than in the Punjab, and from the autumn of 1897 to the close of 1911 the province has lost 2,030,187 persons by recorded deaths from plague. The number of unrecorded deaths must have been large. Unfortunately the disease has been specially fatal to young women of child-bearing age and the result has been a serious check to the steady increase of population in the province. At the general census, which was taken on the night of the 10th March 1911, the population as compared with the population in 1901 was found to have decreased by 1·7 per cent. in British territory and by 4·8 per cent. in Native States. Sir Louis Dane took leave during the summer of 1911, and during his absence Mr. J. M. Douie, C.S.I., the 1st Financial Commissioner, officiated as Lieutenant-Governor.

80. In the cold weather of 1909-10 was held the Industrial and Agricultural Exhibition for the Punjab, North-West Frontier Province and Kashmir. Differing from previous exhibitions held in Lahore, on this occasion the display was primarily and mainly the result of private enterprise. Originating in the first instance with the provincial committee of the Indian National Congress, the details of the undertaking were carried out by an Executive Committee of prominent residents of Lahore. At the same time the scheme obtained the cordial support of Government, which authorised the committee to enlist the services of Government officers and also furnished a guarantee against loss up to the extent of Rs. 1 lakh. His Honour the Lieutenant- Lahore Exhibition.

Governor, moreover, consented to become a patron of the Exhibition. A site for the buildings was found in the piece of ground near the Fort and the Badámi Bágh station. The Exhibition was opened in state by His Honour the Lieutenant-Governor on December 11th, 1909, accompanied by the Maharaja of Kashmir and most of the Punjab Chiefs. Before formally opening it, His Honour delivered an address, in which he made a comprehensive survey of the past and present agricultural, industrial and economic conditions of the province, and pointed out the directions in which further development of the resources of the country could most hopefully be looked for.

1910. King Edward Memorial.

81. To commemorate the death of His Majesty King Edward VII a memorial scheme was propounded and, in response to the Lieutenant-Governor's appeals, it was resolved at a representative gathering held in Lahore on 30th July 1910 that, as a Punjab memorial to His late Majesty, a new and enlarged medical college should be built, and the attached hospitals—the Mayo, the Albert Victor and the Lady Aitchison—should be expanded and improved so as to form a great central institution for medical relief and instruction. At the same time the Veterinary College would be improved and enlarged so as to give instruction up to the degree of Veterinary Surgeon. A provincial committee was appointed to carry out the scheme with the Hon'ble Sir Arthur H. S. Reid, Kt., Chief Judge, Punjab, as President. The executive committee and sub-committees, appointed by the Provincial Committee, proceeded to work out the details, and a rough scheme was submitted to Government by the end of the year. The aggregate expenditure on sites, buildings and equipment is expected to exceed Rs. 35 lakhs towards which the Government of India have contributed Rs. 10 lakhs. The sum of Rs. 13 lakhs has been collected in public subscriptions.

1911. Coronation Durbar.

82. The Coronation Durbar, held in Delhi, in December 1911, by His Majesty King George V, to announce his accession to the Imperial throne, was an Imperial event beyond the scope of this report. The provincial administration, however, was deeply engaged in the arrangements culminating in the gorgeous and historical pageant, and materially contributed to the successful issue. In particular the work of the Punjab police force in handling the traffic and controlling the vast concourse that assembled to do honour to the Royal visitor elicited well-merited admiration. The province hailed with pleasure the gracious announcement that the seat of the Imperial Government would in future be in Delhi, and accepted as inevitable the subsequent decision that that historic city, so closely associated with the makers of the Punjab, should cease to be under the administration of the Local Government.

3. FORM OF ADMINISTRATION.

General.

General administration.

83. The direct administrative functions of Government are performed by the Lieutenant-Governor through the medium of the Secretariat which consists of three executive Secretaries, styled the Chief, Revenue and Financial Secretaries, respectively, with three Under-Secretaries, a Registrar and Mir Munshi. In the Public Works Department there are also three Secretaries—the Chief Engineers—one in the Buildings and Roads Branch and two in the Irrigation Branch, the former assisted by an Under and an Assistant Secretary, and the latter by two Under and one Assistant Secretary. The heads of the Police and Educational Departments are also Under-Secretaries to Government in their respective departments. There is no Executive Council in the Punjab, but the Lieutenant-Governor is assisted by a Legislative Council, the history and development of which are given in Chapter III. The administrative units are the districts, in charge of Deputy Commissioners, assisted by European and Indian assistants, arranged in divisions in charge of Commissioners, to whom the Deputy Commissioners are subordinate. The number and average size of the districts and divisions will be found in section 5 of this chapter. In purely administrative work, including the control of District and Municipal Boards, no authority is interposed between the Commissioner and Government.

District administration.

84. The district itself is further sub-divided into tahsils in charge of a Tahsildar, with whom is associated one, in some cases more, assistants or Naib Tahsildars. In a few districts one or more tahsils form a sub-division, which is placed in charge of an officer with extensive powers exercised under the supervision of the Deputy Commissioner. In most districts the villages of a tahsil are grouped into zails for which a zaildar is selected from among the headmen or lambardars of the village of the zail. The lambardars are remunerated by a small cess on the Government land revenue demand, but the zaildars are given a small remuneration of about 1 per cent. of the demand itself. The lambardars and zaildars are "village officers" and not Government servants. The district Land Records and Excise staff, though organised for special departmental work, is available for general administrative work, and especially in the case of the Land Records establishment is frequently so employed. The staff of the district also includes the Superintendent of Police, the Civil Surgeon and the District Inspector of Education with their subordinates, all of whom are subject to control by the Deputy Commissioner. Other departments are not organised with special reference to the district.

The Chief Court.

85. In 1866 a Chief Court, consisting of two Judges, a Civilian and a Barrister, was substituted for the Judicial Commissioner, and was constituted the final appellate authority in civil and criminal cases, with powers also of original criminal jurisdiction in cases where European British subjects are charged with serious offences, and of original civil jurisdiction in special cases. In the year 1869 a third Judge, a Civilian, was added to the Court. The constitution of the Chief Court subsequently remained unaltered until 1881, when the steadily increasing work made it necessary that some assistance should be given to the Judges. In October of that year the temporary appointment of a fourth Judge was accordingly sanctioned. Notwithstanding this addition to the Court, it was found in July 1882 that the number of civil appeals pending was considerably in excess of that on the corresponding date of the preceding year, and in the following November two additional Judges were employed. From time to time it was found necessary to retain the services of these additional officers, and in the latter half of the year 1886 the appointment of a fourth permanent Judge was sanctioned. The abolition in 1885 of the Bench system in the Divisional Courts, explained in paragraph 94, added to the number of appeals preferred to the Chief Court, and so congested became the state of work in it that for some time it was necessary to employ six Judges, while in 1888 the Punjab Courts Act of 1884, by which the present system was introduced, had to be amended so as to diminish the appellate business of the highest tribunal in the province. Although it was then found possible to reduce the number of Judges to five, arrears again became marked in 1895 and 1896, and at the end of that year the strength of the Court was again raised to six (four permanent and two temporary) Judges. In 1899 the law of appeal in the Punjab Courts Act was further amended; but the hopes that the Court would now be able to cope with the work proved fallacious, and in 1904 it became necessary to employ four temporary Judges to clear off arrears. A fifth Judge was at the same time permanently added to the Court. Even these measures proved inadequate. One temporary additional Judge has been constantly employed, and a second has frequently been found necessary. The law of appeal has during the past year again been amended by Punjab Act I of 1912 in the hopes of reducing the number of appeals, but a further increase in the permanent constitution of the Court appears to be only a question of time.

Divisional Courts.

86. Subordinate to the Chief Court are the Divisional and Sessions Judges, each exercising civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. As Divisional Judges these officers try most of the first appeals in civil suits, and as Sessions Judges they try sessions cases and hear criminal appeals from the District and 1st class Magistrates, and thus fulfil the functions of District and Sessions Judges in the Regulation Provinces.

District Civil Courts.

87. In the district the District Judge's court is the principal court of original jurisdiction, and in this court are heard appeals in minor civil suits

from the subordinate courts of the district. A Subordinate Judge, exercising unlimited civil jurisdiction, is appointed in many districts to assist the District Judge, but the majority of civil suits are tried in the first instance by Munsifs, posted either at district head-quarters or at outlying stations. Munsifs are of three grades—the jurisdiction of a first grade Munsif being limited to suits not exceeding Rs. 1,000 in value. The assistants to the Deputy Commissioner are always invested with the powers of Munsifs and assist largely in the disposal of civil suits, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued, with the increase in the numbers of Munsifs themselves. There are Small Cause Courts at Lahore, Amritsar, Delhi and Simla, and many Munsifs are invested with the powers of such courts under Act IX of 1887. Honorary Civil Judges with powers of a Munsif are appointed from time to time and do useful work.

District Criminal Courts.

88. The Deputy Commissioner is the District Magistrate and controls the whole of the subordinate criminal courts of the district. The District Magistrate and occasionally other Magistrates are invested under section 30 of the Indian Penal Code with powers to try all offences not punishable with death and to inflict sentences up to seven years' imprisonment The District Magistrate hears appeals from the Magistrates of the second and third classes, but this power is shared with Additional District Magistrates who are appointed in certain districts. In the districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner, on the finding of a Council of Elders (jirga), may pass sentence up to fourteen years. Sentences exceeding seven years require the confirmation of the Commissioner, who has revisional jurisdiction in all cases. All the assistants to the Deputy Commissioner are invested with magisterial powers as well as the District and Subordinate Judges, but not the Munsifs. Tahsildars usually exercise 2nd class powers and Naib Tahsildars powers of the 3rd class. Considerable assistance is obtained from Honorary Magistrates who sit either singly or as a Bench under section 15 of the Code of Criminal Procedure.

Revenue Courts.

89. Special Revenue Courts, to decide all suits regarding tenant rights, rents and divers cognate matters, in which civil courts have no jurisdiction, have been established under the Punjab Tenancy Act. Tahsildars and Naib Tahsildars are Assistant Collectors, 2nd grade, the assistants to the Deputy Commissioners are Assistant Collectors, 1st grade, and the Deputy Commissioner is the Collector, all three classes of courts exercising original jurisdiction. Appeals from Assistant Collectors lie to the Collector, from him to the Commissioner, and from the Commissioner to the Financial Commissioner, who is the final court of appeal in revenue cases.

Political administration.

90. The Punjab Native States are arranged for the purposes of supervision into five groups—(*i*) the Phulkián States (comprising Patiála, Jínd and Nábha), for which a separate Political Agent was appointed in 1901, and Baháwalpur which was included in the Political Agent's charge in 1903; (*ii*) the States of Kapurthala, Mandi, Máler Kotla, Farídkot and Suket in the political charge of the Commissioner of Jullundar; (*iii*) the States of Sirmúr, Kalsia, Pataudi, Loháru and Dujána in the political charge of the Commissioner of Delhi; (*iv*) the State of Chamba in the political charge of the Commissioner of Lahore; and (*v*) the 19 Simla Hill States, which are in the charge of the Deputy Commissioner of Simla, who is *ex-officio* Superintendent. These officers rank in each case as Agents to the Lieutenant-Governor. For the independent Baloch tribes on the borders of the Dera Gházi Khan district the Commissioner of Multán is Agent, but the ribes are in the immediate charge of the Deputy Commissioner of Dera Gházi Khan as Political Officer.

Imperial Service Troops.

91. In the Afghan War of 1878-80 contingents from some of the Punjab Native States did good service in the Kurram Valley; and when war seemed imminent in 1885 the Native Princes placed the resources of their States at the disposal of the Government of India. From this offer arose (in 1889) the body of Imperial Service Troops. These troops, though available for Imperial Service when placed at the disposal of the British Government by their Rulers, belong absolutely to the States and are recruited from their subjects.

They are, however, under regular inspection by British officers, who are responsible to the Foreign Department of the Government of India. The cost of the troops is borne by the States, the charges of the British inspecting staff falling on the revenues of British India. The Sirmúr Sappers saw service on the Samána in 1891; in the Punjab Frontier campaign of 1897-98 the Jínd, Kapúrthala, Nábha and Patiála Infantry and the Máler Kotla and Sirmúr Sappers were engaged; and in Tirah (1897-98) the Jínd and Nábha Infantry and the Máler Kotla and Sirmúr Sappers. The Máler Kotla Sappers were also employed in China in 1900-01. In each case the Imperial Service Troops have acquitted themselves with credit.

Financial administration.

92. The development of decentralisation in the administration of the finances in India and of the present system of provincial finance belongs to the domain of Imperial Administration. It is enough to say that the Government of India has delegated to the Local Government the control of expenditure on the ordinary administrative services together with the whole or a proportion of certain heads of revenue sufficient to meet those charges. Of the *quasi*-commercial departments, forests have recently been made wholly provincial: the transactions, other than on capital account, connected with the larger irrigation works are divided between the Imperial and Provincial accounts: the post office, telegraphs, and railways are wholly Imperial. The financial administration of the Local Government is subject to the general supervision of the Supreme Government and to certain definite limitations in respect to the creation of appointments, the remuneration of officers, the revision of establishments and the execution of large public works. The Local Government is accordingly merely the delegate of the Government of India; it has, moreover, no borrowing powers and can impose no additional taxation, and in case of unforeseen calamities, such as famine and plague, has to fall back upon the assistance of the Supreme Government. The control of the Legislative Council over provincial finance is explained in chapter III. The Provincial Budget is prepared in the Secretariat, but is subject to alteration by the Government of India, with regard to the divided heads and the proposed totals of revenue and expenditure. The Government of India also fix a limit for ordinary *plus* fresh recurring expenditure. The distribution of the sum which it is proposed to devote to new expenditure is considered by the Finance Sub-Committee of the Legislative Council before the budget is presented to the full Council.

Provincial settlement.

93. A revision of the arrangements between the Local and Imperial Governments, known as the provincial settlement, which was intended to be of a permanent nature, took effect from the year 1905-06. As in other provinces, it was felt that this settlement treated the Punjab with less than liberality. In the Punjab the development of the canal colonies and the increasing expenditure necessary in these areas introduced an element of uncertainty which made the ascertainment of a normal standard of revenue and expenditure unusually difficult. The resources of the province were further straitened by the abolition, under the orders of the Government of India, of various growing sources of income, chief of which were the famine cess (included in provincial rates) and the patwari cess, and the substitution of fixed compensatory assignments. The justice of the Punjab claim to greater liberality was gradually recognised, and with effect from 1911-12 modifications in the provincial settlement were introduced, which have greatly eased the position. The share of land revenue and irrigation receipts assigned to the province was raised from $\frac{3}{8}$ to $\frac{1}{2}$, and in raising in like manner the share of provincial liability for irrigation charges the Government of India guaranteed to the province a net annual income from irrigation of Rs. 41 lakhs in place of the previous Rs. 30$\frac{3}{4}$ lakhs. At the same time forest income and expenditure previously shared equally by the two Governments became wholly provincial.

The Punjab Commission.

94. The civil administration is carried on by the Punjab Commission, recruited from the Indian Civil Service, the Indian Army and the Provincial Civil Service. Since the separation of the North-West Frontier Province, however, recruitment from the Indian Army has ceased. The development of the present system has been gradual. Prior to the year 1875 the officers

of the administration combined within the scope of their duties all judicial and executive functions. This arrangement had been in force since the annexation of the Punjab, but the rapidly increasing calls on the time and energies of administrative officers that accompanied the development and advancing prosperity of the country during the decade following the mutiny, and especially the increase of judicial work, pointed to the necessity for some steps towards the ultimate separation of judicial from executive duties, as in the Regulation Provinces. Accordingly in the year 1875 measures were introduced to relieve Tahsildars, Deputy Commissioners and Commissioners of the excess of judicial work which interfered with their efficiency. In each tahsil, where the number of suits was large, a Munsif was posted, the judicial work of Deputy Commissioners was in twenty-three districts transferred to Judicial Assistants, and two Additional Commissioners at Lahore and Jullundar, respectively, were appointed to aid in the disposal of civil and criminal appeals and of original criminal trials in serious offences. This scheme afforded no relief to the Commissioners as a body, and in less than seven years experience showed that further changes were imperatively called for and the following reforms were introduced in the year 1884 :—The ten Commissionerships were reduced to six, those of Hissar, Ambála, Amritsar and Multán ceasing to exist, and the districts of which they were composed being apportioned between the divisions of Delhi, Jullundar, Lahore, Ráwalpindi and the Deraját. The Sirsa district was abolished and divided between the districts of Hissar and Ferozepore. The remaining thirty-one districts of the province were divided into seven civil divisions, two Divisional Judges being appointed for each division, mainly with a view to the prompt and, in certain cases, final disposal of civil appellate work, the two Judges of each division sitting as a Bench for hearing appeals. Except in the Deraját, Commissioners were entirely relieved of civil and criminal judicial work, though not of revenue appellate business. For criminal business the province was divided into ten sessions divisions, in three of which Joint Sessions Judges were appointed in addition to the Sessions Judge. In fourteen out of the thirty-one districts special officers were appointed as District Judges : in the other seventeen districts the Deputy Commissioners became the District Judges, but in eleven of these Subordinate Judges were appointed with original and appellate powers to relieve the Deputy Commissioners of all civil judicial work except powers of control and the distribution of business. In the remaining six districts the Deputy Commissioners were expected to hear civil appeals, but not to decide original civil suits. In April 1885 the Judges of the Chief Court represented that the Divisional Courts, which had come into being on the 1st November preceding, were quite unable to cope with the number of appeals coming before them, and before the close of the year it was found necessary to discontinue the Bench system and to substitute thirteen Divisional Courts with a single Divisional and Sessions Judge in each ; and such was the state of arrears in the courts that six additional Divisional Judges had to be temporarily appointed to clear off the accumulations. The changes rendered necessary by the separation of the North-West Frontier Province reduced the number of executive divisions to five and of districts to twenty-seven, while the number of judicial divisions was reduced by one to twelve. Eight District Judgeships only were graded posts in the Punjab Commission carrying special rates of pay : the remainder being held by Assistant Commissioners or members of the Provincial Civil Service.

This system proved adequate to the needs of the day and is substantially that now obtaining. Any accumulation of arrears in the courts of the Divisional Judges could be met by the temporary appointment of additional Divisional Judges. Gradually, however, the increase in the volume of executive business and the desirability of still further evolving the separation of the judicial from the executive branch of the administration led to the withdrawal of civil judicial work from the remaining Deputy Commissioners, and separate officers have been given the powers of District Judges in all districts. The number of paid appointments of District Judge, however, has not been increased. In the meantime the increase in the volume of litigation rendered necessary an addition to the number of Divisional and Sessions Judges and four such appointments were sanctioned in 1909.

Provincial service.

95. From the first natives of India have been employed as assistants to the Deputy Commissioners under the style of Extra Assistant Commissioner, but were debarred from rising to higher rank. The experiment of throwing open high appointments in the Commission was made under an Act of Parliament of 1870 (Vict. 33, Cap. 8), constituting the Statutory Civil Service. The experiment was not successful and of the Statutory Civilians appointed under this Act, three only, chosen in 1888-90, are still borne on the cadre of the Punjab Commission.

The investigations made by the Public Service Commission of 1886 led in 1893 to the constitution of a Provincial Civil Service. The previously existing establishment of Extra Assistant Commissioners was re-arranged in seven grades of Extra Assistant Commissioners paid Rs. 250, 300, 400, 500, 600, 700 and 800 per mensem, respectively. The chief feature of the re-organization of the Provincial Service was that a certain number of appointments for which members of the Indian Civil Service or Military Officers were formerly recruited were thrown open to members of the Provincial Service. These were two appointments of Divisional Judge, two of Deputy Commissioner, two of District Judge, two of Settlement Officer and one of Junior Secretary to the Financial Commissioners. The Local Government, however, has the right to appoint to the last-named post either a member of the Provincial or of the Indian Civil Service. Two further appointments of Divisional Judge were added to the "listed" appointments when the number of Divisional Courts was increased in 1909. The listed appointments are the means of giving to the more able and deserving members of the Provincial Service the responsible employment in the administration of the country which the Statutory Service was originally designed to supply. The Statutory Civilians now hold of the listed appointments one Deputy Commissionership and two Divisional Judgeships. The remaining appointments, with the exception of that of Junior Secretary to the Financial Commissioners, are held by members of the Provincial Service.

The Provincial Service was originally arranged in one service of Extra Assistant Commissioners available for judicial or executive work, but the principle of separating judicial from executive functions and the necessity of specialisation in training has led to the gradual separation of the judicial and executive branches in the highest six of the seven grades. The pay of each grade is the same in both branches. The members of the executive branch and the combined 7th grade are still styled Extra Assistant Commissioners, but those of the first four grades of the judicial line are known as Extra Judicial Assistant Commissioners, and of the last two as Subordinate Judges.

The Provincial Service is recruited from the Tahsildar and Munsif establishments, from selected members of the various departments and by direct appointment either on nomination or by competition. The combined 7th grade of Extra Assistant Commissioner gives the authorities an opportunity of ascertaining for which line, executive or judicial, the newly-appointed members show most aptitude.

A similar system of "Imperial" and "Provincial" Services has been introduced in many of the departments.

Departments.

The Departments.

96. The principal heads of departments are the Financial Commissioners, the Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration and the Legal Remembrancer, all of whom are subordinate to the Local Government. The Accountant-General, the Postmaster-General, the Director of Telegraphs, and the Manager, North-Western Railway, whose head-quarters are in each case in Lahore, represent Imperial Departments under the Government of India.

Provincial Departments.

The Financial Commissioners.

97. A Financial Commissioner was appointed as chief authority in the Revenue Department on the abolition of the Board of Administration in 1853 : and in 1865 a Settlement Commissioner was added to control settlement operations under the Financial Commissioner. One of the changes introduced in 1884 was the abolition of the Settlement Commissioner and appointment of a 2nd Financial Commissioner. In 1897, however, the old arrangements were reverted to and the appointment of Settlement Commissioner was revived in place of the 2nd Financial Commissionership, in order that adequate supervision of settlement and colonisation operations might be secured. In 1910 it was found advisable to make a further change. The Settlement Commissionership was again abolished, and a 2nd Financial Commissioner again appointed. The appointment of Excise Commissioner and Superintendent of Stamps was abolished at the same time, and control over both settlements and excise administration was to some extent entrusted to the Commissioners of divisions. The Financial Commissioners besides being the highest Court of Revenue jurisdiction, as already explained, are the Heads of the Departments of Land and Separate Revenue and of Agriculture, and control the Director of Agriculture, the Director of Land Records, the Registrar of Co-operative Credit Societies, and, in his relations with the agricultural and pastoral population, the Conservator of Forests. The Financial Commissioners are also the Court of Wards of the province.

Wards' estates.

98. Up to the year 1903 the management of wards' estates was provided for by the Punjab Laws Act (IV of 1872), under which the Deputy Commissioner of each district was his own Court of Wards with very little in the nature of law to control his action. Under Punjab Act II of 1903 the Financial Commissioner became the Court of Wards, and, among other provisions, authority has been taken for dealing with claims on encumbered estates, and it is now possible to retain estates under management on the ward coming of age. The tendency in this branch of the administration is to restrict Government intervention to the least possible. Act VIII of 1890 provides a suitable procedure for the appointment of private persons as guardians to minors and the Land Alienation Act provides protection against permanent expropriation of landed interest. There is accordingly less necessity for official interference with the management of private property.

Agricultural Department.

99. The Provincial Agricultural Department was organised on its present footing in 1903, but the first expert did not arrive until 1905. The Director is assisted by a Deputy and an Assistant Director, and the department has experimental farms at Lyallpur and Gurdáspur. The farm at Lyallpur is representative of the great western canal-irrigated tract, where wheat, cotton and toria are the staple crops : that at Gurdáspur is favourably situated for inquiry into the barani and well cultivation of the Central Punjab, where wheat and sugarcane are most important. Up to date the energies of the department have been devoted more especially to investigation and experiment on the farms. Work has been started in the districts by demonstration, but, owing to lack of establishment, both working and supervising, can only be extended very slowly. The Punjab Agricultural College and Research Institute was opened at Lyallpur in 1909, and has a staff of European Scientists as Professors and of Indian Assistant Professors. The main course in the College is in scientific agriculture and takes three years. There is accommodation for 38 students in each year or 114 in all, but so many are not forthcoming. There has been recently started a simple practical vernacular course for the sons of zamíndárs, who have passed through a primary school. This course will entail residence in the College for about six months in all at different periods of the year.

The Government Agri-Horticultural Gardens at Lahore are managed by a botanical expert under the control of the Director of Agriculture. The maintenance of public pleasure and flower grounds, the production of fruit, fruit and other trees, vegetables, flowers and seeds for sale, and the experimental cultivation of new varieties are features in the management. A botanical section of the garden to which science students at the University may resort is also maintained,

There are public gardens at Delhi, Simla, Lahore, Amritsar and Ráwalpindi, and of smaller dimensions at the head-quarters of most other districts and at the tahsils. These are managed by Municipal Committees and District Boards.

The Civil Veterinary Department.

100. The Civil Veterinary Department is under the general control of the Director of Agriculture. The department was reorganised in 1903 on the recommendation of the Horse and Mule Breeding Commission, and the staff now consists of a Chief Superintendent and four Superintendents, one for the North and South Punjab, respectively, with a large staff of Inspectors and Assistants, a third in charge of the Government Cattle Farm at Hissar, which has recently been placed under the Punjab Government, and a fourth on the investigation of camel diseases. Since the reorganisation, the Civil Veterinary Department has been able to devote its energies to the prevention and cure of disease—a subject of immense importance to the agricultural and pastoral population of the province, which hitherto had received too little attention. Great progress has already been made: the work of the department continues to expand in every direction and its popularity is evident.

The Punjab Veterinary College at Lahore is the only institution of its kind in Northern India. The results achieved by the efforts of the professorial staff have been considerable. Further development is retarded by lack of accommodation and of funds.

The Land Records Department.

101. The Director of Land Records, who has two Personal Assistants, is purely an inspecting and advising officer, the Land Records establishment, the patwari and kanungo agency, being under the control of the Deputy Commissioner of the district. The Director supervises and inspects the village records of every district and the statistical records of tahsil and district offices connected therewith, and supervises and inspects the patwari and kanungo agency of the province. On all matters of detail connected with these subjects the Director's recommendations are accepted as those of an expert specially charged with duties of a technical character.

The patwari is an inheritance from the village system of old days. A patwari is appointed for a circle consisting of one or more villages, and is under section 3 of the Land Revenue Act a "village officer" and not a Government servant. They were formerly paid from a cess on the land revenue, but in 1906 the State took over the charge and abolished the patwar cess and with it the patwar fund. The patwaris are arranged in three grades usually drawing Rs. 10, Rs. 12 and Rs. 14 or Rs. 15 per mensem, and their appointment is non-pensionable. They are required to live with their family in their circle. In addition to keeping up the records entrusted to his charge, the nature of which is given in section 4 of this chapter, the patwari is required to report to the Tahsildar any calamity affecting the land, crops, cattle or the agricultural classes, and to bring to notice alluvial and diluvial action of rivers, encroachments on Government lands, the death of revenue assignees and pensioners, progress of works made under the agricultural loans and similar laws, and the emigration or immigration of cultivators. He is expected to be ready to make surveys and field inspections, and to aid in relief of agricultural distress and in elections under the District Boards Act. It is his duty to allow any one interested to inspect his records, and he has to supply extracts from them on receipt of fees, for which a scale is provided. When revenue collections are in progress, he must furnish any information that may be required to facilitate the collections, but he himself is not permitted to take any part in the collection of the revenue. He may be called upon, under certain circumstances, to make maps to illustrate Police enquiries in cases of serious crime.

The patwari is under the immediate supervision of a circle supervisor known as the kanungo, the title of the old Muhammadan institution being thus retained. Kanungos are recruited to the extent of two-thirds of their numbers from patwaris of at least three years' service; the rest are selected. The qualifications required in the latter case are—the educational

test of having passed the Entrance examination of the Punjab University, the age limit of being under 25 years old when accepted, and a practical training by at least two years' service as a patwari or an apprentice patwari. All kanungo candidates are required to pass a departmental test and to obtain a certificate of efficiency from the Director of Land Records before they are confirmed in the appointment. Kanungos, known as tahsil office kanungos, are placed in charge of the records at the tahsil.

In each district there is a district or sadr kanungo, a promoted kanungo, who is of sufficient status to be eligible for admission to the register of Tahsildar candidates. The district kanungo is the inspecting officer of the land record work of the district, both in the field and in the tahsil offices. He himself maintains the statistical registers relating to the whole district and is responsible for the custody of all land records filed in the district office. The responsibility of the Tahsildar and his Naibs for the inspection and correctness of the work of the kanungos and patwaris is, however, not affected by the duties of the district kanungos. The kanungos are inspected by the Tahsildar and his deputy, who are expected to verify the crop entries field by field in estates subject to the fluctuating system of assessments, and 25 per cent. at least of the entries made in the record of titles of each estate. The Revenue Assistant, a member of the Provincial Service, specially charged with the work, sees that this duty is carried out properly and efficiently.

Colonies.

102. The establishment of new settlements on waste land is a work apart from ordinary district administration, but, once the colony has reached a healthy growth, its management follows the lines of ordinary routine. The existing colonies have all reached this stage, and it is only necessary briefly to detail the special appointments which have been made in the past. In the Sidhnai Colony the Deputy Commissioner of Multán was himself Colonization Officer and for the Sohág Pára and Chúnián schemes special Assistants under the Deputy Commissioners of Montgomery and Lahore were appointed. For the Chenab and Jhelum Colonies, however, an independent officer of the rank of Collector was necessary with one or more assistants. On the Chenab Canal it was found necessary to retain this officer from 1892 to 1907, but on the Jhelum Canal the eight years 1901 to 1909 sufficed. In both cases the special colony work is now carried out under the orders of the Deputy Commissioners of the various districts by members of the district staff. In the smaller schemes the Commissioner has always been the controlling officer, but on the resuscitation of the appointment of the Settlement Commissioner in 1897 that officer assumed administrative control of the Chenab Colony and subsequently, on its inception, of the Jhelum Colony also. This system was abolished on the Chenab Canal in 1909 and on the Jhelum in 1908, when the Commissioners resumed control.*

Co-operative Credit Societies.

103. In view of the passing of Act X of 1904, a Provincial Registrar of Co-operative Credit Societies was appointed in 1903 with a staff which now consists of eight Inspectors and nine Sub-Inspectors, to register, inspect and generally assist the societies, and, if necessary, to enforce a compulsory wind-up. The Punjab type of society is usually confined to a single village area and arranges its own affairs through an elected committee. The members take shares payable in ten yearly instalments and not returnable until the end of ten years. After three or four years the average bank is able to pay off the old debts of its members and to meet all their requirements. To finance the village societies central banks are being formed at the head-quarters of districts and the societies are also being grouped into unions for mutual help and inspection. A few societies have been formed in the towns principally among weavers. There are now some 1,750 societies in existence, with funds amounting to over Rs. 50 lakhs. The societies, which are beginning to pay for their Sub-Inspectors, are now controlled under Act II of 1912.

*The voluminous details of colony administration are given, generally, in the Punjab Colony Manual, 1907, and for the Chenab Colony in the Chenab Colony Gazetteer.

Excise.

104. The immediate responsibility for the excise arrangements of each district has always rested with the Deputy Commissioner, supervised by the Commissioner of the division; general control being exercised by the Financial Commissioner. In 1888 the growing importance of excise revenue and the necessity for specialised supervision led to the appointment of a Commissioner of Excise. In 1910, most of the recommendations of the Excise Committee of 1906 having been carried into effect, the post was abolished. The preventive establishment attached to a district consists of an Inspector, with one or more Sub-Inspectors and a peon. An Assistant or Extra Assistant Commissioner is usually placed in special charge of the district administration as an Excise Officer.

The staple spirit of the province—"white rum" made from cane sugar or molasses—is manufactured in the licensed distilleries at Amritsar, Ráwalpindi Karnál, Sujánpur (Gurdáspur) and Solan (Simla Hills), which are private enterprises. The staff posted at each distillery to arrange for the levy of still-head duty and to safeguard the interests of Government consists of an Inspector and one or more Sub-Inspectors. This staff is supervised by a Superintendent of Distilleries. In matters calling for technical advice the Punjab Government has the benefit of a share in the services of the Distillery Expert appointed for the United Provinces, the Punjab, the North-West Frontier Province and Ajmer-Merwára.

Beer is brewed after European methods in licensed breweries at Simla, Solan, Kasauli, Ghora Gali (Murree Hills), Ráwalpindi and Dalhousie. Duty is levied on the quantity sold.

Imported liquor, including beer imported or brewed after European methods, is sold under wholesale and retail licenses, the fees for which are fixed, except where the retail sale is likely to compete with that of country spirit shops, in which case the license is auctioned. Licenses for wholesale vend of country spirit are issued on fixed fees, while those for retail vend are auctioned.

Poppy cultivation for the production of opium is allowed only in the Simla district and the Kulu sub-division of the Kángra district. The bulk of the opium consumed in the Punjab is manufactured at the Government factory at Gházipur, and is generally known as Excise opium. The only other licit sources of supply are imports from the Hill States under the political control of the Punjab Government and from Afghánistán. Opium produced in Kulu and Simla is subject to an acreage duty, and in the case of Simla opium a transport duty is also levied at the Kot Khai warehouse. Opium imported from Hill States pays duty in the district of import, and imports from Afghánistán in the North-West Frontier Province. For the supply of these varieties to retail vendors wholesale licenses are issued, for which fixed fees are charged. Excise opium is issued from the Government Treasuries direct to retail vendors on payment of a price, part of which represents cost of production and the remainder the duty. Licenses for retail vend are sold by auction.

Charas is imported from Yárkand to the warehouses at Sultánpur (Kángra), Hoshiárpur and Ráwalpindi, and pays duty on issue. The hemp plant grows wild in the southern Himalayan districts, and its cultivation for the production of bhang is prohibited throughout the province except under license in Dera Gházi Khan, where an acreage duty is charged. An import duty and a duty on transport from one district to another are also imposed. Licenses for wholesale and retail vend of charas and bhang are issued, the former on fixed fees and the latter by auction.

Registration.

105. Under the Indian Registration Act, 1908, Deputy Commissioners are *ex-officio* Registrars of titles for their districts and Tahsildars Sub-Registrars for their tahsils, but most of the registrations are performed by non-official Sub-Registrars. General control is exercised by the Inspector-General of Registration, an appointment held by the Director of Land Records, who is also Registrar-General of Births, Deaths and Marriages under Act VI of 1886.

Director of Industries.

106. The Director of Industries, whose appointment is amalgamated with the Directorship of Agriculture, is also Registrar of Joint Stock Companies. Under his supervision the external land trade is recorded at various posts. For internal trade the Punjab and North-West Frontier Province are divided into 5 blocks—(1) Delhi City, (2) Cis-Sutlej, (3) Sutlej-Jhelum, (4) Jhelum-Indus, (5) Trans-Indus. A record of the trade of the blocks by rail with one another and with other provinces is prepared in the different railway audit offices from the invoices of goods received. Each railway records only the statistics of its imports : the figures for the exports of each province are obtained by summing the import returns of railways outside the province. The trade of the Punjab with Sind by river is registered in the office of the Deputy Conservator and Registrar, River Indus, at Sukkur. No road-borne trade is registered in connection with the internal trade of the province. The value of the goods despatched by rail and by river is not recorded on the invoices, and consequently average values have to be assigned to each article when the accounts are prepared. The value rates received quarterly from other provinces are assigned to the imports into the Punjab from those tracts, and those ruling in this province are assigned to the exports to other provinces.

Legal Department.

107. The administration of the legal affairs of the Punjab Government is in the hands of a Legal Remembrancer (who is also Secretary to the Legislative Council), a Government Advocate and an Assistant Legal Remembrancer at head-quarters and Public Prosecutors in important districts. With the exception of the Legal Remembrancer, these officers are free to take up private practice as far as is consistent with their official duties.

Police.

108. The organisation of the police force on annexation has been explained in the historical summary. By the beginning of 1860 its strength had risen to 24,700 men and in addition there were the thagi, cantonment and canal police. In 1861 the cis-Indus police were reorganised under the Police Act (V of 1861) and in 1863 the trans-Indus, thagi, cantonment and canal police were brought under the general system : the force being meanwhile gradually but substantially reduced. The Railway Police were organised in 1869.

The present combined force is administered by the Inspector-General of Police who is assisted by a Personal Assistant. The province is divided into the Eastern, Central and Western Ranges in charge of Deputy Inspectors-General with head-quarters at Ambála, Lahore and Ráwalpindi. Each district is in charge of a Superintendent, assisted usually by one or more Assistant Superintendents. The district is divided for police purposes into circles supervised by Inspectors, and again into thanas or police station jurisdictions in the charge of a Sub-Inspector, a second Sub-Inspector being added where the average crime exceeds 100 cases a year. There are, inclusive of urban police stations, 435 thanas in the province, the highest individual number being 24 in the case of Lahore district. The average police station thus embraces an area of some 230 square miles and a population of over 47,000 souls. The staff of a thana varies, but in rural circles usually consists of one Sub-Inspector, 2 head constables and 10 constables. In a fourth police range, also in charge of a Deputy Inspector-General, are included Criminal Investigation, Railway Police and the Police Training School and Finger Print Bureau. The two latter institutions are established in the Phillaur Fort in Jullundar district and are in charge of a Superintendent. The Railway Police are organised on a separate establishment from the district police. The railways guarded by the Punjab Railway Police include all the lines within the provincial boundary inclusive of Native States. The railways are divided into two districts, Northern and Southern, each in charge of a Superintendent, whose head-quarters are at Lahore where the jurisdictions meet. The establishment is, like the district police, graded among Inspectors, Sub-Inspectors, head constables and constables. The districts are divided into 41 police stations. At the present day the total police force of the province, exclusive of gazetted officers, consists of 1,075 officers and 19,974 men, practically half of whom are armed with revolvers and bored-out rifles,

respectively. About one-third of the men are able to read and write. The total number of the force gives one officer to 5 square miles of country and 1,044 persons.

On the recommendation of the Police Commission of 1902-03 a service of Provincial Police officers has been established, consisting at present of 18 Deputy Superintendents arranged in four grades. These officers are chiefly employed as assistants to the Superintendents either at head-quarters or in sub-divisions of districts and are posted to the heavier charges. They are available to take charge of districts in the case of temporary vacancies.

The criminal tribes of the Punjab are controlled under Act III of 1911, which has recently replaced an older Act with a view to affording better control of the settled and registered tribes and to authorising measures of dealing with wandering tribes and gangs. Sixteen tribes have been registered, of whom the Báwarias, Sánsis, Hárnis, Pakhiwáras, Mínas, Tagus, Bháts and Ghutkas are genuine criminal tribes, while the rest are branches of the main tribes of the province which have developed pronouncedly criminal tendencies.

Rural Police.

109. Originally a menial servant of the village community, the village watchman, was paid out of the village funds in kind or in cash. This placed him in complete dependence on the headmen as representatives of the village, and this relation was legalized in 1876 by rules under the Punjab Laws Amendment Act, XV of 1875, but the actual appointment or dismissal of the watchman was vested in the Deputy Commissioner. Village watchmen are appointed for each village or collection of villages; the beats being determined by the Deputy Commissioner. Where the village watchmen in any village are five or more, one of them may be appointed "dafadar" with extra pay. The chokidara tax is levied from all occupants of houses in the beat by a rate assessed on the annual value of the houses. In addition to their duty of watch and ward the watchmen have powers of arrest and are jointly responsible with the headmen for reporting crime. They are further charged with the duty of reporting births and deaths at the police station at the fortnightly visit which a watchman of each beat has to make to report the state of the beat. The watchmen are not as a rule armed, but in some places they carry swords or spears. The number employed in the province is approximately 30,000.

In 1893 the increasing difficulties of obtaining men for the post led to enquiry. It was found that the maximum pay, Rs. 3 per mensem, paid half-yearly, was inadequate, and that even so it was not always paid regularly. Power was taken to secure regular payment and the maximum salary was raised to Rs. 5 per mensem instead to Rs. 3. Even so the watchman is essentially a menial, generally of a low caste, almost always illiterate, and often of doubtful character. The lowness of the pay compels him to work or cultivate land to eke out a living, and his association with criminals is often alleged. It has frequently been proposed by Police Officers that these chokidars should be put more under the Police and made independent of the village headmen, but the best administrative officers have always opposed this suggestion on the ground that it would strike at the root of the principle of village responsibility. The chokidar is the servant of the headmen and should remain so: a principle re-affirmed by the Police Commission of 1902-03.

In the smaller municipal towns a body of town watchmen is frequently employed either alone or to supplement the regular force. The town watchmen are entertained under the Municipal Act and their pay is not subject to the same maximum as that of the village watchmen. The number of these men is about 150 all told.

Jails.

110. The Jail Department consists of an Inspector-General and three Superintendents of the Central Jails at Lahore, Montgomery and Multán. District jails are situated at the head-quarters of 20 of the districts in charge of the Civil Surgeon, who receives an allowance for his jail duties. The female jail is at Lahore and with the district jail is in charge of an officer of the department. At the head-quarters of 6 districts and at Rájanpur (Dera Gházi Khan) and in Kulu subsidiary jails have been established to receive and forward to their destination prisoners convicted in the district.

P. W. D. (Buildings and Roads).

111. The Buildings and Roads Branch of the Public Works Department is administered by a Chief Engineer. The province is divided into three Circles of Superintendence,—with head-quarters at (1) Ráwalpindi, (2) Ambála and (3) Lahore, respectively,—11 divisions and 29 sub-divisions. In addition the Simla Hydro-Electric division, with 3 sub-divisions, is in the superintending charge of the Sanitary Engineer. Changes in the administrative arrangements are frequent as necessitated by the varying character of the work of the department. This branch, formerly known as the Provincial Branch, is maintained from provincial funds, and its primary object is the construction and maintenance of Imperial and Provincial works; but it also assists municipalities and district boards, and important works are carried out for such bodies by the Government Engineers, a percentage being usually charged for establishment, tools and plant.

P. W. D. (Irrigation Branch).

112. The Irrigation Branch of the Public Works Department is administered by two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Two Under-Secretaries and a Personal Assistant are employed at head-quarters to deal with departmental work. The Circles of Superintendence are at present nine in number—(1) the Western Jumna Canal, Delhi, with 3 divisions and 12 sub-divisions; (2) the Sirhind Canal, Ambála, with 4 divisions and 11 sub-divisions; (3) the Upper Bári Doab Canal, Amritsar, with 6 divisions (including the Central Workshops division) and 14 sub-divisions; (4) the Lower Bári Doab Canal, Lahore, with 4 divisions and 14 sub-divisions; (5) the Deraját Inundation Canals, Multan, with 4 divisions and 11 sub-divisions; (6) the Lower Chenab Canal, Lyallpur, with 6 divisions and 19 sub-divisions; (7) the Upper Chenab Canal, Lahore, with 3 divisions and 12 sub-divisions; (8) the Lower Jhelum Canal, Jhelum, with 3 divisions and 9 sub-divisions; and (9) the Upper Jhelum Canal, Jhelum, with 6 divisions (including the Railway and Quarries division) and 21 sub-divisions. There are thus 39 divisions and 123 sub-divisions, but several of these, on the canals under construction, are of temporary character only. Previous to the provincial settlement of 1905 this Branch was an Imperial Department, but the Provincial Government now participates in the profits and bears a share in the working expenses. In addition to maintaining all the canals in its charge, the Irrigation Branch is responsible for the assessment of the water-rates leviable on irrigated areas, and, in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops also. For maintenance purposes the sub-division is divided into sections in charge of overseers or sub-overseers. For revenue purposes there is a separate division into sections in charge of a zilladar, each section being sub-divided into canal patwaris' circles. The revenue establishment of a division is supervised by a Deputy Collector who is generally a 2nd class Magistrate.

Medical Department.

113. The control of the medical department of the province vests in the Inspector-General of Civil Hospitals, who also supervises the working of the Lahore Medical College and School, the Chemical Examiner's department, the Punjab Lunatic Asylum and the temporary departments of the Chief Plague Medical Officer and Chief Malaria Medical Officer. Medical work in the districts is in the charge of the Civil Surgeons, 14 of whom are members of the Indian Medical Service, the others being Military Assistant Surgeons or Uncovenanted Medical Officers chiefly Civil Assistant Surgeons. Two Civil Surgeons are posted to Simla, and during the hot weather Civil Surgeons are transferred to Murree and Dalhousie from two of the plains districts, their places being taken by Assistant Surgeons. To the more important hospitals, including railway, canal and police institutions, are attached Assistant Surgeons, in some cases assisted by Sub-Assistant Surgeons, while to the less important Sub-Assistant Surgeons only are attached. The Mayo Hospital at Lahore and the special railway, canal and police hospitals are kept up at the expense of Government, but the ordinary hospitals and dispensaries in the districts, with the establishments employed in them, are maintained by municipal or district funds. In addition, in certain cases private institutions, *e.g.*, the

Walker Hospital, Simla, and many mission dispensaries, receive grants-in-aid and submit to a certain measure of Government control including the submission of returns.

Plague.

114. For the measures adopted to combat the epidemic of plague a temporary department has for some years been organised under the Chief Plague Medical Officer. In the districts the Civil Surgeon is generally in charge of operations, but additional officers are employed from time to time as Plague Medical Officers as well as a considerable temporary staff. The principal measures on which reliance is now placed are inoculation, evacuation and rat destruction. The special staff is supplied with portable medical and surgical equipment and a large amount of medical aid is distributed by this means.

Lunatic Asylum.

115. Since the closure of the old Delhi and Lahore Lunatic Asylums in 1900, the arrangements made by the State for the custody and treatment of lunatics have been concentrated in the present Lahore Asylum, which was opened in March of that year. The superior staff consists of a Superintendent, one Military Assistant Surgeon as Deputy Superintendent, and a second as Assistant Deputy Superintendent in charge of the hospital. The female asylum is in the charge of the Franciscan Sisters, from whose devotion to their duties and sympathy with their patients the asylum has received the utmost benefit.

Leper Asylums.

116. There are leper asylums at Ambála, Baba Lakhan (Siálkot), Ráwalpindi, Tarn Táran (Amritsar) and Dharmsála. Of these the first three are managed by the American Mission, that at Tarn Táran by the Church Missionary Society, and that at Dharmsála by the District Board through the Civil Surgeon. The number of lepers annually treated in these institutions is about 600. Lepers move about the country a good deal in quest of charity, as the law does not authorise their detention against their will.

Chemical Examiner.

117. The Chemical Examiner is assisted by two Indian Assistants. Analyses are undertaken for the various departments, military as well as civil, in the Punjab, for the Punjab Native States, and for the Balúchistán Agency. In 1911 some extra work was performed in connection with the Delhi Durbar.

Pasteur Institute.

118. Although situated at Kasauli the Pasteur Institute of India is a private association which was incorporated in 1902. It is chiefly financed by a Government grant-in-aid and by contributions from Local Governments, Municipalities and District Boards; but it depends largely on receipts from private individuals also. The institute performs the functions of a provincial laboratory for the Punjab in consideration of special financial assistance from Government.

The Central Research Institute, also situated at Kasauli, is a separate establishment and is directly under the Government of India.

Public health.

119. The authorities concerned with public health are: (1) the Sanitary Commissioner, (2) the Sanitary Board, (3) District and Local Boards, (4) Municipalities, and (5) Cantonment Committees.

The Sanitary Commissioner, who is assisted by a Deputy Sanitary Commissioner, is the adviser of Government on all matters connected with sanitation and public health, except as regards plague and malaria, and makes sanitary inspections of towns and villages. In addition to his more technical duties the Sanitary Commissioner supervises the arrangements for the record of vital statistics and also the vaccine operations of the province. He also acts as Secretary to the Sanitary Board.

The Sanitary Board is chiefly an advisory body. It consists of the 2nd Financial Commissioner as President, the Revenue Secretary, the Secretary, Public Works Department (Buildings and Roads Branch), a Secretary, Public Works Department (Irrigation Branch), the Inspector-General of Civil Hospitals, two Indian members, the Sanitary Commissioner, the Sanitary Engineer, and the Commissioner of the division in which the meeting of the Board is held. The Board examines all important sanitary projects and advises Government

whether sanction should be granted or withheld. It also allots grants-in-aid to approved urban or rural sanitary schemes out of the annual allotment placed by Government at its disposal for the purpose.

In his capacity of technical adviser to the Board the approval of the Sanitary Engineer is required on all sanitary schemes submitted to the Sanitary Board. The Sanitary Engineer also makes inspections of completed water-works and drainage schemes in the large towns of the province. In the course of these inspections the Sanitary Engineer points out to the local bodies any defects noticed by him in the up-keep of the system, which may affect public health, and makes suggestions for their remedy. His advice is also available to local bodies on the preparation of sanitary schemes.

In the large municipalities of Lahore, Amritsar and Simla there are fully qualified Health Officers. Elsewhere supervision of sanitation is one of the duties discharged by Civil Surgeons and their subordinate Assistant and Sub-Assistant Surgeons. Epidemics other than plague are dealt with, under the general control of the Sanitary Commissioner, by the medical and vaccination staff of districts working under the orders of the Civil Surgeons.

Vaccination.

120. Though supervised by the Sanitary Commissioner, vaccination is more particularly the concern of the Deputy Sanitary Commissioner, who is Superintendent of the Punjab Vaccine Institute, and as such is responsible for the supply of vaccine lymph throughout the province. He has also directly under him a special vaccination staff employed in places for which no local staff is provided and dealing with outbreaks of small-pox anywhere in the province. Civil Surgeons have at their disposal a local staff of vaccinators under a District Superintendent of Vaccination who, when not employed on their principal duty, are available for dealing with epidemics and for checking the registration of births and deaths. Vaccinations are also performed at dispensaries by the ordinary medical staff. Ten cantonment committees entertain their own vaccinators. Under the control of the Sanitary Commissioner, five Divisional Inspectors of Vaccination and Registration are employed, who visit and inspect in turn each district of their division. Vaccination is compulsory only in those towns the municipal committees of which have adopted the Vaccination Act.

Vital statistics.

121. The compilation of the vital statistics of the province is superintended by the Sanitary Commissioner from returns submitted for each municipality and district by the Civil Surgeons. In rural areas the village watchman is charged with the duty of reporting occurrences in his beat, which he does fortnightly to the police stations in whose jurisdiction his beat lies. In towns the Municipal Act imposes on house-holders and others the duty of reporting births and deaths to the municipal registrars. Besides being checked by the sanitary and vaccination staff, the birth and death registers are also inspected by Tahsildars and Naib Tahsildars.

Education.

122. The department controlled by the Director of Public Instruction consists of an Inspector of Schools in each civil division, with two or more assistants, and a District Inspector with assistants in each district. There are, in addition, two Inspectresses of Girls' Schools and an Inspector of European Schools. The training establishments include the Central Training College at Lahore and a Training Class for European Teachers at Sanáwar (Simla Hills). Normal schools for men are established at the head-quarters of each division and for women at Lahore. Other Government educational institutions are the Government College at Lahore with a large professorial staff, the Government High Schools located as a rule at the head-quarters of each district, and the Lawrence Military Asylum, Sanáwar. More specialised institutions are the Mayo School of Art, the Clerical and Commercial School at Amritsar, and the Railway Technical School at Lahore. The Reformatory School at Delhi also is controlled by the Director of Public Instruction in his capacity of Inspector-General of Reformatory Schools.

Some account of the Punjab University and of the system of Public Instruction generally will be found in chapter VII.

Forests.

123. The Forest Department is organised in twelve territorial divisions, one of which comprises the leased forests of Bashahr State, the only forests in the Punjab Native States now directly controlled by the Local Government. The Direction and Resin Divisions also form separate charges. The divisions are in charge of Deputy or Assistant Conservators, either of the Imperial or Provincial Services, under the control of the Conservator. The total area administered by the Forest Department is 8,359 square miles in British territory and 364 square miles in Bashahr, but 1,000 square miles are desert and 500 square miles inaccessible rock and snow. The area of Reserved Forest under the Forest Act (VII of 1878) is 1,844 square miles: of Protected Forests 5,203; and of Unclassed Forests 1,312. An area of 105 square miles of reserved forest is under the Military authorities.

Municipalities.

124. In some form or other municipal administration has existed in the Punjab since annexation and by 1864 there were 49 committees, of which 28 had elected members. These municipalities had been constituted under the executive authority of Government, but doubts having arisen as to their legal status the first Municipal Act for the Punjab was passed in 1867. A more comprehensive Act followed in 1873, under which 8 first class, 17 second class and 165 third class committees were constituted, controlled by the Local Government, the Commissioner or Deputy Commissioner according to their class. A new Act was passed in 1884 introducing the elective principle, widening the sphere of municipal activity and recognising two classes of municipality only. In consequence 41 of the smaller committees were abolished between 1885 and 1887. An amended Act was passed in 1891 which reformed the system of taxation and provided a simple form of government for towns known as "notified areas" which it is inexpedient to constitute regular municipalities. Amendments of this Act followed in 1896, 1900 and 1905, and it has now been replaced by Punjab Act III of 1911. In this Act certain faults of drafting and arrangement have been removed and doubts felt as to the meaning of the legislature resolved. The advance which has taken place in the ideals of Local self-Government in the twenty years that have elapsed since the previous enactment has made it necessary to grant to municipalities and to the Local Government more extended powers over matters affecting the health and comfort of the public.

District Boards.

125. Prior to 1871 each district had a district committee which was merely an advisory body. The rules under the Local Rates Act of that year made these committees administrative bodies. In 1883 Lord Ripon's Act extended the elective principle to district boards and under it local boards also were established in tahsils. These, however, were soon found to be superfluous and have been gradually abolished in most districts. The district fund is mainly derived from the local rate, which is a cess on the land revenue of the district, supplemented by grants from Provincial funds. The expenditure is chiefly on the maintenance of schools and dispensaries, vaccination, roads and rest-houses, arboriculture, ferries, cattle-pounds, horse-breeding and horse and cattle fairs. The necessity of conforming to departmental rules leaves little scope for local initiative. There are 28 district boards, excluding Simla, where the Deputy Commissioner exercises the powers of a district board. Elsewhere the Deputy Commissioner is nearly always *ex-officio* President. Four districts still have local boards, 17 in number.

Imperial Departments.

Post Office.

126. The districts and States of the Punjab (except the States of Chamba, Jínd, Nábha and Patiála which have their own postal arrangements) form, together with the North-West Frontier Province, Balúchistán and Kashmír, one postal circle with head-quarters at Lahore, under the Postmaster-General of the Punjab and North-West Frontier Postal Circle, assisted by a Deputy Postmaster-General and three Personal Assistants. The province is divided into nineteen postal divisions in charge of Superintendents. Up to the year 1906, in addition to the Imperial post, there existed a local or district post, a substitute for the posts which landowners originally were bound to maintain for the conveyance of official correspondence in each

district. This personal obligation was replaced by a cess on the land revenue which in 1883 was merged in, and became part of, the local rate. In 1906 the cess (which averaged some Rs. 1½ lakhs per annum) was abolished and the district post system was amalgamated with the Imperial post.

Telegraphs.

127. The Punjab Native States are included with the British districts in the arrangements for telegraphic communication, and the whole province with the North-West Frontier Province, Kashmír and a portion of Balúchistán is comprised in the Punjab Circle with head-quarters at Lahore, in the charge of a Director, assisted by a Deputy Superintendent. The circle is divided into the Lahore, Ambála, Quetta and Ráwalpindi divisions, the last embracing the Frontier Province and Kashmír. Each division is in charge of a Superintendent and at times an Assistant Superintendent is also attached. Subordinate to the above, Deputy Superintendents of the general and traffic branches are placed in charge of or attached to the more important offices as occasion requires.

Railways.

128. Five separate administrations operate the railways of the province, but of these the Great Indian Peninsula Railway works only the 60 miles of the State-owned Agra-Delhi Chord line from near Kosi to Delhi, which was opened in November 1904; and the East Indian Railway the Delhi-Ambála-Kálka Railway Company's main line Delhi to Kálka opened in March 1891 and branch Thánesar to Kaithal opened in December 1910, with a total mileage of 193 miles. The Punjab mileage of the Jodhpur-Bikáner metre gauge railway system is even smaller as only 22 miles of the main line opened in September 1902, and 31 miles of the Hissar extension opened in July 1911, lie within provincial boundaries. The Bombay, Baroda and Central India Railway Company, which has running powers over the Muttra-Delhi section of the Agra-Delhi Chord line, giving the administration access on the standard gauge direct from Bombay to Delhi, also works the Rájpútána-Málwa Railway metre gauge system, of which 68 miles of the main line of the Rájpútána section, Ahmadabád to Delhi, opened in February 1873; the whole of the Rewári-Bhatinda-Fázilka section, 262 miles, opened between March 1883 and January 1885; 46 miles of the Rewári-Phulera Chord, opened throughout in May 1905; and the 7 miles of the Farrukhnagar Branch in Gurgaon district are in the Punjab. With the above exceptions the railways of the province are operated by the North-Western (State) Railway administration, which combined in 1886 the earlier Sind-Punjab and Delhi (1861), the Punjab Northern (1875), the Indus Valley and Kandahár (1878), and the Amritsar-Pathánkot (1884) administrations. The first section of railway opened in the Punjab was the 32 miles, Amritsar to Lahore, of this administration, which began working on April 10th, 1862. In addition to the State lines proper the North-Western Railway works in the Punjab (1) the Kálka-Simla State line; (2) for private companies, the Amritsar-Patti and Southern Punjab Railways (including the Ludhiána extension and Sutlej Valley Railway); and (3) for Native States, the Ludhiána-Dhuri-Jakhal (Jínd and Máler Kotla), the Rájpura Bhatinda (Patiála) and Khánpur-Chachrán (Baháwalpur) lines. At the close of the year 1911 the Punjab mileage of the North-Western Railway, with dates of original through opening, was as follows:—

	Miles.	*Years.*
MAIN LINE.		
South to Lahore ...	231	1870
Lahore to west ...	418	1878
Lahore to north ...	242	1880
BRANCHES.		
Golra-Básal ...	47	1881
Amritsar-Pathánkot ...	67	1884
Rájpura-Bhatinda ...	107	1889
Sind-Ságar ...	342	1890
Siálkot (1884)-Jammu Frontier ...	36	1890
Ráewind-Ferozepore ...	33	1892
Southern Punjab, main line ...	400	1897
Narwána-Kaithal ...	23	1899
BRANCHES—*concld.*		
Kundián-Campbellpur ...	120	1899
Ferozepore-Bhatinda ...	55	1899
Wazírabad-Khánewál ...	201	1900
Ludhiána-Jakhal ...	79	1901
Kálka-Simla ...	59	1903
Ludhiána-Macleod Ganj	152	1906
Jech Doab ...	149	1906
Sháhdara-Sángla ...	55	1907
Khánewál-Lodhrán ...	56	1909
Amritsar-Patti (1906)-Kasúr ...	54	1910
Kasúr-Lodhrán ...	208	1910
Khánpur-Chachrán ...	22	1911
Chichoki-Shorkot Road	136	1911
Under 20 miles ...	62	——

With the exception of the Kálka-Simla line, which is on the 2′ 6″ gauge, all the lines worked by the North-Western Railway are on the standard gauge. The doubling of the main line has been taken in hand, and by the end of 1911, 150 miles of double track were in use south of Lahore, 4 miles north and 153 miles west.

There are 4,043 miles of railway in operation in the Punjab, of which 307 miles are double track.

Accounts.

129. The accounts of the Provincial Civil Departments are audited by the Accountant-General, Punjab, who is also Commissioner of Paper Currency, assisted by two Deputy and seven Assistant Accountants-General. The transfer of the audit of the accounts of the Buildings and Roads and Irrigation Branches of the Public Works Department to the Accountant-General has only recently taken place, the separate office of the Provincial Examiner of Public Works Accounts having been abolished in 1910. A separate branch conducts the audit of Local Funds Accounts under the supervision of an Examiner. The Government cash balances are kept in Government treasuries at the head-quarters of districts in the charge of the Deputy Commissioners; except at Lahore, Delhi and Simla, where the balances are kept at the agencies of the Bank of Bengal. Sub-treasuries, subordinate branches of the treasury at district head-quarters, are located at each tahsil head-quarters and are in charge of the Tahsildars. For the management of the Paper Currency a Currency Office with Remittance Treasury is established at Lahore, with currency agencies or currency chests at the head-quarters of each district. The agencies are practically branches of the Currency Office, exchanges of notes for cash and *vice versâ* with the public being made by the officer in charge on his own responsibility. The currency chest is purely for the deposit of surpluses withdrawn from the treasury. In practice on the transfer of surplus funds from a local treasury to its currency, a corresponding amount of notes are put into circulation by transfer from the currency to the remittance treasury at Lahore. If the balance so accumulated is required in any part of India, the transfer is accomplished under the orders of the Comptroller-General by replacing the notes in the currency, thus setting free a corresponding sum in coin from the currency reserve of some other province. The Punjab, however, from a resource point of view is deficit every year owing to the large military payments and to the presence of the Imperial Government at Simla. This fact of course has no relation whatever to the equilibrium or otherwise of the provincial finances.

Army Remount Department.

130. The present arrangements for horse, mule and donkey breeding are the outcome of the recommendations of the Horse and Mule-breeding Commission, which submitted its report in July 1901. Briefly the Commission found that under the direction of the Civil Veterinary Department Government funds were being wasted, in that efforts were being made to improve the breed of horses and mules in districts where no hope of success could be entertained, and that in some cases a type of horse was being evolved unsuitable for the needs of the Army, in whose interests primarily the funds were voted. As a result the sphere of Government operations was confined to the thirteen selected districts of Ráwalpindi, Attock, Jhelum, Gujrát, Shahpur, Jhang, Lyallpur, Gujránwála, Lahore, Multán, Dera Gházi Khan, Amritsar and Ferozepore, and since May 1st, 1903, the control of operations connected with horse, mule and donkey breeding, whether with Imperial or district board stallions, has been transferred to the Army Remount Department. District board and private horse-breeding elsewhere is looked after by the Civil Veterinary Department as before, but in the selected districts it was obviously necessary to place all operations under one authority. With the exception of the Government donkey stud at Mona, and the establishment at the Government Farm in Hissar, the breeding is in the hands of private persons or regiments, the service of both Imperial and district board stallions being given free for approved mares.

The department is a branch of the Quartermaster-General's Department, and as such under the control of the Commander-in-Chief. The administrative head is the Director General, Army Remount Department.

The districts are divided into the Rawalpindi, Jhelum Colony, Chenab Colony and Lahore circles. Depôts, with which, however, the provincial administration has no concern, are maintained at Mona and Sargodha, both in the Jhelum Colony. The circles are in the charge of a Superintendent, a Military officer of the Remount Department, with whom is associated a Veterinary Officer, who is selected from the Commissioned Officers of the Army Veterinary Corps, and in the important Jhelum Colony Circle by an Assistant Superintendent, also an officer of the department. The Superintendent is assisted by a native officer from a cavalry regiment of the Indian Army and the Veterinary Officer by a Veterinary Inspector, a trained Veterinary Surgeon of standing corresponding to that of the native officer. Each circle is divided into sub-divisions known in the colonies as zails (not coterminous with revenue zails), each of which is in charge of a Veterinary Assistant and includes the stables supervised by a jamadar. These jamadars are as far as possible graduates of the Punjab Veterinary College.

Salt.

131. The operations in the Punjab connected with the levy of the tax on salt are under the control of the Commissioner, Northern India Salt Revenue, Agra. The department is not under the control of the Local Government, and the income and charges do not come upon the provincial estimates. The departmental staff employed in the province consists of an Assistant Commissioner with head-quarters at Khewra (Jhelum district), 5 Superintendents, and 3 Assistant Superintendents. There is also one Superintendent in charge of the Sultánpur Salt Works in the Gurgaon district and an Assistant Superintendent in the Dera Gházi Khan district. These two officers are under the Assistant Commissioner, Upper Division, Internal Branch, Agra. Under section 30 of Act XII of 1882 all Deputy Commissioners in the Punjab are invested with the powers of an Assistant Commissioner, all Assistant and Extra Assistant Commissioners with the powers of a Superintendent, all Tahsildars and Naib Tahsildars in separate charge of tahsils with the powers of an Inspector, and all subordinate tahsil officials with the powers of a Salt Revenue officer inferior in rank to an Inspector.

Archæology.

132. The archæological treasures of the Punjab are under the care of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra. For the repair and conservation of the Monuments the assistance of the Buildings and Roads Branch of the Public Works Department is invoked where necessary. The Provincial Museum is at Lahore, and contains Græco-Buddhist sculptures of more than local reputation as well as a fine collection of coins. The Delhi Museum of Archæology located in the Mumtaz Mahal is under the control of the Archæological Department.

4. CHARACTER OF LAND TENURES AND SYSTEM OF SURVEY AND SETTLEMENTS.

Land Tenures.

General.

133. The subject of land tenures, in a province of which the various parts differ so widely both physically and in respect of the races which inhabit them as in the Punjab, is one which it is almost impossible to treat satisfactorily in the brief space that can be allotted to it in an Administration Report. The settlement reports of the province contain full and minute information on the subject, and the student of land tenures in the Punjab can obtain a thorough knowledge of them only by a careful study of these reports. This is particularly the case as regards the land tenures of the districts in the south-west of the province, in which examples of peculiar tribal tenures are to be met with which can hardly be explained with brevity and at the same time with correctness. These are generally tinged with a feudal spirit, and often take the form of rights of overlordship, or claims to receive services retained by tribes which are or were once dominant over other bodies of cultivators who are now sub-proprietors. A fuller sketch of the general tenures of the

province than can be conveniently embodied in the pages of an Administration Report will be found in the Punjab Land Administration Manual.*

Proprietorships.

134. Taking the British districts of the province as a whole it may be estimated that about one-sixth of the area is the property of Government, the remaining five-sixths belonging to private owners. A large part of the area belonging to Government is so situated that it cannot be brought under cultivation without the aid of extensive works of irrigation. The Lower Chenab Canal irrigates some 1,900,000 acres of what was formerly Government waste land and the Lower Jhelum Canal an additional 360,000 acres. The Lower Bari Doab Canal now approaching completion will command an additional area of Government waste. Large areas in the hills and elsewhere, which are unsuited for cultivation, are preserved as forest or grazing lands, and others in addition to the colony lands are held under lease from Government for purposes of cultivation. The proportion of cultivated land owned by Government to that owned by private individuals is at present about one to twelve.

Land Revenue.

135. All land is held subject to the payment of land revenue to the State, or to grantees holding from the State, unless such liability has been redeemed or compounded for, and this revenue at present exceeds Rs. 314½ lakhs per annum, of which more than Rs. 29½ lakhs are received by assignees who had, on various grounds, claims to consideration from Government. In some cases these assignments are of the nature of the release of the revenue of lands belonging to the assignees, but have no necessary connection with proprietary right; and in the majority of instances the grantees are merely entitled to receive the revenue payable to Government, the amount of which is limited in the same way as if it were paid direct to Government.

Succession.

136. The ordinary rule of succession which obtains in the Punjab is one by which all male issue of a deceased holder of ancestral property divide that property *per capita* and equally. The effect of this rule, as applied to the succession to an assignment of land revenue, had threatened to result in such minute sub-division of the original assignment as to seriously imperil its political utility. An Act has accordingly been passed (The Punjab Descent of Jagirs Act, Punjab Act IV of 1900) which enables the Local Government to take steps with a view to confining the succession to such assignments to a single heir as impartible property.

Rights of alienation.

137. While the unhampered exclusive use of property in a man's possession, whether ancestral or acquired, for his lifetime, with a free disposal of the income, is not denied, freedom of alienation whether by gift or bequest is, in regard to ancestral immoveable property, subject in most cases to certain restrictions. The prevailing sentiment is that as regards such property in the hands of any individual, there exists some sort of residuary interest in all the descendants of the first owner, or body of owners, however remote and contingent may be the probability of some among such descendants ever having the enjoyment of the property. In short, the owner in possession is not regarded as having the sole interest in the property and power to dispose of it, so as to defeat the expectations of those who are deemed to have a residuary interest. It is, however, recognised that in case of legitimate necessity the possessors of the residuary interest have no power to object to an alienation of ancestral immoveable property by the owner in possession.

Land Alienation Act.

138. In addition to the above-mentioned customary restraints on the full power of an owner to deal with property in his possession the Alienation of Land Act of 1900 restricts by statute the alienation of agricultural land in the Punjab. The fatal facility with which the agricultural tribes of the Punjab had got into the clutches of money-lenders, resulting in the course of time in the reduction in their status from proprietors to tenants, had long been marked and remedies discussed for arresting this tendency. The outcome of years of discussion was Act XIII of 1900, which limits the free transfer of landed property by persons who are declared to be members of

* By J. M. Douie, I.C.S., published at the *Civil and Military Gazette* Press, Lahore, 1908.

agricultural tribes to members of the same tribe or of a tribe in the same group. Transfers of land by such people to others not so specified require the consent of the Deputy Commissioner, for whose guidance explicit rules have been laid down. The Act also places restrictions on mortgages to non-agriculturists. The original Act permitted free transfers to "agriculturists," an "agriculturist" meaning a person holding agricultural land either in his own name or that of an ancestor in the male line as an owner or hereditary tenant from the time of the first regular settlement of the district in which the land is situate or from such other date as Government may determine. This power was taken away by an Amending Act in 1907. The Act has been sympathetically administered, and has so far fulfilled the hopes with which it was framed. Opposed of course by the classes against whose acquisitive activities it was directed, it has been acquiesced in both because of its popularity with the preponderant agricultural population whom it protects from the effects of their ignorance and folly and also because of the opening of new spheres of investment in the development of which it has been the care of Government to assist. Fears that agricultural credit would be destroyed have proved groundless, and the price of land now stands far higher than even before the passing of the Act.

Rights of Pre-emption.

139. The great mass of the landed property in the Punjab is held by small proprietors, who cultivate their own land in whole or in part. The chief characteristic of the tenure generally is that these proprietors are associated together in village communities, having to a greater or less extent joint interests and, under our system of cash payments limited so as to secure a certain profit to the proprietors, jointly responsible for the payment of the revenue assessed upon the village lands. It is an incident of the tenure, that if any of the proprietors wishes to sell his rights, or is obliged to part with them in order to satisfy demands upon him, the other members of the same community have a preferential right to purchase them at the same price as could be obtained from outsiders.

Punjab Pre-emption Act.

140. The recasting of the law of pre-emption was one of the corollaries to the passing of the Punjab Alienation of Land Act. The new law came into force as Punjab Act II of 1905, its chief aim being to prevent a non-agriculturist when he has once gained a footing in a village community from buying up other shares in the village as they come into the market and so expropriating the true agriculturist and breaking up the village community. The pre-emption law is admittedly unsatisfactory, and gives rise to abuses, particularly in the form of bogus threats by persons with rights of pre-emption to enforce those rights when a sale of land is in question. A considerable body of opinion is now in existence especially among judicial officers that the time has come to sweep away the whole system as an archaic survival no longer in keeping with modern conditions.

Zamindari Tenures.

141. In some cases (technically known as zamindari tenures) all the proprietors have an undivided interest in all the land belonging to the proprietary community; in other words, all the land is in common, and what the proprietors themselves cultivate is held by them as tenants of the community. Their rights are regulated by their shares in the estates, both as regards the extent of the holdings they are entitled to cultivate, and as regard the distribution of profits, and if the profits from land held by non-proprietary cultivators are not sufficient to pay the revenue and other charges, the balance would ordinarily be collected from the proprietors according to the same shares

Separate holdings.

142. It is, however, much more common for the proprietors to have their own separate holdings in the estate, and this separation may extend so far that there is no land susceptible of separate appropriation which is not the separate property of an individual or family. In an extreme case like this the right of pre-emption and the joint responsibility for the revenue, should any of the individual proprietors fail to meet the demand upon him, are almost the only ties which bind the community together. The separation, however, generally does not go so far. Often all the cultivated land is held in separate ownership, while the pasture, village site, roads, ponds or tanks, &c., remain in common. In other cases land cultivated by tenants is the common property

of the community, and it frequently happens that the village contains several well-known sub-divisions, each with its own separate land, the whole of which may be held in common by the proprietors of the sub-division, or the whole may be held in severalty, or part in separate ownership and part in common.

Pattidari and Bhaiachara Tenures.

143. In those communities (technically known as bhaiachára and pattidari) with partial or entire separation of proprietary title the measure of the rights and liabilities of the proprietors varies very much. It sometimes depends solely upon original acquisition and the operation of the laws of inheritance; in other cases definite shares in the land of a village or sub-division different from those which would result from the law of inheritance have been established by custom; in other cases reference is made not to shares in the land, but to shares in a well or other source of irrigation; and in the majority of cases in the east and south-east of the Punjab no specified shares are any longer acknowledged, but the area in the separate possession of each proprietor is the sole measure of his interest. Where the rights and liabilities are determined according to certain known shares the tenure is known as pattidari, where possession is the measure of each man's right and liability it is called bhaiachára. It is sometimes the case, however, that while the separate holdings do not correspond with any recognized shares, such shares will be regarded in dividing the profits of common land, or in the partition of such land, and wells are generally held according to shares, even where the title to the land depends exclusively on undisturbed possession.

Village communities.

144. Throughout a great part of the province the organization of the proprietors of land into village communities has existed from time immemorial, and is the work of the people themselves, and not the result of measures adopted either by our own or by previous Governments. Indeed, these communities have sometimes been strong enough to resist the payment of revenue to the Government of the day, and before our rule nothing was more common than for them to decide their disputes by petty wars against each other, instead of having recourse to any superior authority to settle them. But in some localities the present communities have been constituted from motives of convenience in the application of our system of settlement. Thus in the Simla hills and in the more mountainous portions of the Kángra district the present village communities consist of numerous small hamlets, each with its own group of fields and separate lands, and which had no bond of union until they were united for administrative purposes at the time of the land revenue settlement. In the south-western districts, again, while regular village communities were frequently found in the fertile lands fringing the rivers, all trace of these disappeared where the cultivation was dependent on scattered wells beyond the immediate influence of the river. Here the well was the true unit of property, but where the proprietors of several wells lived together for mutual protection or their wells were sufficiently near to be conveniently included within one village boundary, the opportunity was taken to group them into village communities. These arrangements were made possible by the circumstance that the village community system admits of any amount of separation of the property of the individual proprietors, and by care being taken that in the internal distribution of the revenue demand it should be duly adjusted with reference to the resources of the separate holdings. They also in general involved the making over in joint ownership to the proprietors of the separate holdings of waste land situate within the new boundary, in which no private property had previously existed.

Quit-rent payments.

145. In some cases the village communities, while holding and managing the land as proprietors (adna málik), are bound to pay quit-rent to the superior proprietors (ala málik), under whom they hold. The settlement is now required to be made in such circumstances with the communities in actual possession of the land, who pay the land revenue to Government and the quit-rent to the superior proprietor, but in special cases the Financial Commissioners may order the settlement to be made with the superior proprietor. The amount which the superior proprietor is entitled to collect is determined at settlement as well as the amount of the land revenue demand.

Limited proprietors.

146. There are sometimes also proprietors holding lands within the estates of village communities, but who are not members of the communities, and are not entitled to share in the common profit, nor liable for anything more than the revenue of their own lands, the village charges ordinarily paid by proprietors, and the quit-rent, if any, payable to the proprietary body of the village. The most common examples of this class are the holders of plots at present or formerly revenue-free, in which the assignees were allowed to get proprietary possession in consequence of having planted gardens, or made other improvements, or because they had other claims to consideration on the part of the village community. In the Ráwalpindi division also it was thought proper to record old-established tenants, who had never paid anything for the land they held but their proportion of the land revenue and village expenses, and had long paid direct to the collectors of the revenue, but were not descended from the original proprietary body, as owners of their own holdings, while not participating in the common rights and liabilities of the proprietary community. Except in the Jhelum and Ráwalpindi districts, where a small quit-rent was in some case imposed, these inferior proprietors, called "málik kabza," were not required to pay anything in excess of their proportion of the Government revenue and other village charges. In Gujrát, at the time of the first regular settlement, this class held no less than 10 per cent. of the total cultivated area, and in Ráwalpindi it paid 9 per cent. of the revenue. In Ráwalpindi the persons recorded as proprietors of their own holdings only were in some cases the representatives of the original proprietary body, jágirdars having established proprietary rights over what were formerly the common lands of the village.

Chakdars and Sillhadar

147. In Multán, Muzaffargarh, Dera Gházi Khan, Jhang and in parts of some other districts in the south-west of the Punjab, a class of proprietors, distinct from the owners of the land, is found under the name of chakdars, sillhadars, tarradadgars or kasúrkhwars. These are the owners of wells, or occasionally of irrigation channels, constructed at their expense in land belonging to others. They possess hereditary and transferable rights, both in the well or irrigation-channel and in the cultivation of the land irrigated from it, but may be bought out by the proprietor repaying the capital they have expended. They are generally entitled to arrange for the cultivation, paying a small fixed proportion of the produce to the proprietor, and being responsible for the Government revenue. Sometimes, however, the management of the property has been made over to the proprietor, who pays the Government revenue, and the chakdar receives from him a fixed proportion of the produce called "hakk kasúr," or a third party may manage the property, paying the Government revenue and the hakk kasúr, out of which the chakdar pays the proprietor's allowance. In Ráwalpindi also there is a small class of well proprietors in the position of middlemen, paying cash rent to the owner of the land and receiving a grain rent from the cultivator.

Tenants' tenures.

148. Tenancies, other than those of Government tenants in the Punjab, naturally fall into three great divisions, *viz.*, (1st) those which are held by tenants with rights of occupancy under the Punjab Tenancy Act (XVI of 1887); (2nd) those which are held under decree of court, lease, or other special agreement, and (3rd) those which are held as tenancies-at-will. These groups may be further sub-divided by the nature of the rent paid, or in the case of tenants with rights of occupancy according to the particular section of the Punjab Tenancy Act under which these rights are held.

Description of tenancies.

149. The rents of tenants with rights of occupancy are liable to enhancement or reduction in accordance with fixed rules which are embodied in the Tenancy Act. And so long as the appointed rent is paid, the occupation of the tenant cannot be disturbed. This tenant right is inheritable by male lineal heirs, by the widow and by male collateral heirs, provided that in the case of the latter the common ancestor occupied the land; and subject to certain restrictions it is also transferable, although in practice it is not very often actually transferred. The widow inherits only a life interest in her deceased husband's holding. Moreover, next to the proprietors, tenants with a right-of-occupancy,

have a pre-emptive claim to purchase any land offered for sale in the village in which their holdings are situated. Tenants-at-will are so far protected that they cannot be ejected save after issue of notice through a court of law. These notices are only issued at particular seasons of the year, and opportunity is given to any tenant who wishes either to contest his liability to ejectment or to claim compensation for unexhausted improvements as a condition precedent to relinquishment of the land to do so. The right to compensation is also regulated by fixed rules embodied in the Tenancy Act.

Tenures of Government waste lands.

150. The management of the immense waste areas of the territory included in the province forms a long chapter in the history of the provincial administration. These areas are mainly owned by the State, but a not inconsiderable amount is included in proprietary estates, and the present Revenue Act still empowers the Local Government to step in and proceed to develop such areas for the benefit of the community under certain conditions. The earliest attempt in the Punjab to colonise waste land was the grant of sukhlambari grants in Hariána and Bhattiána in 1818 to disbanded troopers with the object of forming a military colony in this disturbed area and so keep open a western route to the existing frontier. The state of the country did not prove tempting to settlers, and this experiment resulted in failure. On annexation for a period of over 35 years the policy as regards these waste areas was to encourage the breaking up of waste by the grant of leases on easy terms, on the understanding that, on fulfilment of the terms of the lease as regards the bringing of land under cultivation, ownership would be conceded free or practically free of charge. This policy underlay the lease rules of 1850, 1868 and 1882 and the sale rules of 1863, 1865, 1876 and 1882 were influenced more by the desire of Government to extend cultivation than by any general demand for land. The comparatively small amount of land actually alienated by the State is evidence that the liberal terms offered were not unjustified. Even the lease rules of 1885 permitted purchase on extremely liberal terms, but in view of the imminence of great extensions of canal irrigation in the State-owned waste the operation of these rules was speedily restricted. New rules, however, were not issued until 1897; and do not apply to areas likely to be colonized Under these rules a right of occupancy is in general the only permanent right which the lessee can acquire.

Colony tenures—General.

151. The first leases granted to the pioneer settlers of the Sidhnai (Multan) and Sohag Para (Montgomery) colonies (1886-88) were modelled on the rules for the lease of Government waste lands sanctioned by the Government of India in 1885, and gave the lessee the option of purchasing proprietary rights in his holding, at a very moderate price. The experience gained led to doubts as to the advisability of allowing unrestricted powers of alienation to the colonists, and in 1890 the Supreme Government suggested the grant in future of an inalienable right of occupancy rather than of an alienable proprietary right, as more in accordance with the real interests of colonists: and in the Chenab Colony scheme permanent rights of tenancy became the ultimate form of tenure contemplated for the "peasant" class, the vast majority of the colonists. Provision was, however, made for the creation of proprietors in the "yeoman" and "capitalist" classes of nazarána-paying grantees, and by the sale of land by public auction. The magnitude of the Chenab colonisation scheme and unsuitability of the existing law to the novel conditions led to the Government Tenants (Punjab) Act III of 1893: the main object of which was the simplification of the execution of contracts between the State and its tenants. Registers of tenancies were to be maintained, signatures to the entries in which validated the status of the grantees. The rights of tenants were protected from attachment or sale in execution and transfer by sale, gift, mortgage or other private contract without the consent of the Financial Commissioner was prohibited. Statements of conditions under the Act replaced the old leases and defined the terms of the contract.

Chenab tenures.

152. On the Lower Chenab Canal the peasant colonists received tenancies for 20 years with the free grant of occupancy rights at the expiration of five years from the date of lease: provided its conditions had been observed. The yeomen and capitalists were charged a fine or nazarána on entry, and were given the option of purchase after five years' occupation if they reduced a fair proportion of the grant to cultivation and fulfilled the conditions. The old

Chunian Colony (Lahore) was allotted in 1897 on the same terms, but only peasant grantees were selected. The desire to rescue from extinction the herds of camels which were gradually disappearing before the advancing plough led to the camel service conditions on the Lower Chenab Canal; the grant in these cases depending on the maintenance of a camel fit for State service. The principle of the impartibility of these grants became an essential feature, and a rule of restricted succession was sanctioned, power being reserved to select an heir on the demise of the colonist.

Jhelum tenures.

153. The success of the peasant class in the Chenab Colony led to the conviction that it would be to the interest both of Government and of all classes of grantees if only occupancy rights were granted. Accordingly in the Jhelum and Chunian extension colonies while the classes of peasants, yeomen and capitalists were in essentials maintained, the tenures of all were restricted to occupancy rights. The nazarána-paying grantee obtained his rights on entry after payment of one instalment of nazarána, the peasant after five years: without payment if bound by horse-breeding conditions, otherwise on payment of a nominal charge. The Jhelum colony is in the main allotted to colonists on horse-breeding conditions: this being due partly to the success of the camel-breeding conditions on the Chenab Canal and also to the recommendations of the Horse and Mule Breeding Commission of 1901. The tenant is in such cases bound to maintain and breed from a mare approved by Government. In the Jhelum Colony conditions stereotyped rules of primogeniture replace the previous undefined power of selecting an heir, and these rules were made applicable to the nazarána-paying grantees not bound by service conditions as well as to all service grantees.

Special tenures.

154. Small grants have been made in most colonies on condition of maintaining nurseries or planting trees, and it is customary to allot small areas in each village to be held at will by the village menials or kamíns under the management of the headmen of the village. To increase the status of the headman himself more particularly in peasant villages it has been found advisable to allot a holding usually of some 28 acres to each headman, tenable with the office of lambardar. In the Chenab Colony with few exceptions these lambardari grants are held on mule-breeding conditions, the lambardar being bound to maintain and breed from an approved mare fit for breeding mules for the army. In all peasant villages of the main colonies an area, misnamed chirágah or grazing ground, is reserved from allotment. The area varies according to the period at which allotment was made, from 20 per cent. of the village area in early allotments to 10 per cent. in recent colonisation. The chief advantages derived in practice from the chirágah are the preservation of an open space for the various domestic needs of the villagers, the supply of a little timber and fuel for the village and the provision of an area from which unforeseen demands for allotment can be met.

Change of policy.

155. The question of the colony tenures was one of the subjects considered by the Colonies Committee of 1908, which recommended that all colonists not bound by service conditions should be permitted to acquire proprietary rights on purchase. This complete reversal of the previous policy has been accepted by the Local and Supreme Governments, and proprietary rights can now be obtained in all colonies with the exception of the Jhelum Colony on the expiry of 10 years from date of entry. The concession, which was undoubtedly believed to be in accordance with the wishes of the colonists, has been made possible by the passing of the Alienation of Land Act, which secures in another way the result which the restriction of the peasant's right to an inalienable right of occupancy was intended to achieve.

Cultivating occupancy.

156. The rent paid by Government tenants usually takes the form of the land revenue, which is payable by owners generally, *plus* an additional málikána. This málikána is everywhere so small that the Government tenant's power of subletting his land is scarcely less than that of the owner elsewhere: and his economic position is for all practical purposes the same. To make the statistics for cultivating occupancy of any practical use it has, since the development of the Chenab Colony, been found necessary to class Government tenants with owners. Thus explained the exact area held by owners and Government tenants according to latest statistics is 47 per cent. and, by tenants 53 per cent. of the total cultivated area. It is, however, to be remembered that many persons who are themselves proprietors also hold lands separately in

tenancy, and figured statements thus return tenants with relative exaggeration. The following statistics are the latest available on the subject :—

Details.			Number of holdings.	Area in acres.
Total cultivated area			9,340,510	27,231,427
Area cultivated by owners			3,499,129	12,896,948
Area cultivated by tenants free of rent or at nominal rent			463,974	308,509
Area cultivated by tenants paying rents	With right of occupancy.	Paying at revenue rates with or without málikána ...	717,379	1,553,929
		Paying other cash rents	125,153	318,675
		Paying in kind with or without an addition in cash ...	179,201	495,041
	Without right of occupancy.	Paying at revenue rates with or without málikána ...	450,576	849,446
		Paying other cash rents	948,418	2,734,340
		Paying in kind with or without an addition in cash ...	2,956,682	8,074,539
		Total held by tenants paying rents ...	5,377,509	14,025,970

It will be observed from the above that of the area held by tenants paying rent 83 per cent. is held by tenants-at-will, 17 per cent. only being held by occupancy tenants.

System of Survey and Settlements.

Historical.

157. The history, principles and methods of survey and settlements in the Punjab are fully dealt with in the Punjab Settlement Manual,* of which a second edition has recently been published. The province was fortunate in the early days of British administration in being able to utilise the experience gained in the best methods of revenue administration in the then North-Western Provinces, from which source the early Settlement Officers of the Punjab were partly obtained. Cash settlements of the land revenue demand had been made in some of the districts of the Punjab during the pre-annexation regency of the British Resident, and on annexation similar summary settlements were introduced throughout. These temporary arrangements were replaced as soon as possible by regular settlements on the same system as obtained in the Delhi districts, which had been placed under regular settlement by the Government of the North-Western Provinces before their transfer to the Punjab ; a great deal of time and anxiety were expended in these early settlements over the determination of the various parties who had rights to the soil, and more particularly over the question of ownership. As a rule the cultivators were held to be the owners of the village lands, and were made responsible for the revenue : but in many cases, especially in the south and west of the province, intermediaries were found who were held to have superior claims to the proprietary right. A further difficulty, which was occasioned by the system adopted of making a settlement with each village community separately, was the determination of the village boundary. This involved the question of the waste. In the Eastern and Central Punjab where the village system was strong the limits within which the cattle of each community grazed was known. These were defined, and all unoccupied waste included within the boundary was treated as the common property of the owners. In Kángra the same policy was followed, and the waste became village property, except that the State's rights in certain valuable kinds of trees was reserved. In Kulu the waste has been retained as the property of the State. In the West Punjab the absence of a true village community involved the inclusion in one common boundary of the holdings of many heterogenous clans, and in the uplands of a large area of unoccupied waste. Even so the high unoccupied country in the western portions of the Bári, Rechna and Jech Doabs was retained by the State. In the Sind Sagar Doab the over-liberal admission of private rights in the vast unoccupied area of the Thal greatly reduces the

*By J. M. Douie, I.C.S., published at the *Civil and Military Gazette* Press, Lahore, Revised edition, 1909.

facilities for the development by the State of canal irrigation, by which alone any great extension of cultivation is possible.

Surveys.

158. The basis of a regular settlement is the preparation of a complete cadastral map and an accurate record of titles. The survey of estates is carried out by the village patwaris. The method now adopted in all plain tracts is that known as the square system of measurement. Before the plotting of the fields is commenced, the whole area of the estate is carefully marked out into squares of equal size, and the field map is filled in by plotting the distances of the corners of the fields from the sides and diagonals of these squares. It is found that the patwaris lay out the squares with great accuracy, and the resulting field map is correct enough for all the purposes of the revenue administration.

The units of length and area are not uniform throughout the province, but the 66-inch karm is the most frequent unit of length, being universal in the north and west of the province. With this unit the field map is plotted on a scale of 24 inches = 1 mile : the scales with the other units being approximately the same. The great convenience of this particular unit is that the area of the resultant kanál (which is the unit of area) is half a rood, and of the ghumáo (= 8 kanals) exactly one acre.

Killabandi.

159. Upon the construction of the Lower Chenab Canal and opening of the waste lands in the Rechna Doab to colonisation it became necessary to adopt a unit of grant and the patwari's survey square of 27·7 acres was selected: the vast area was demarcated into such squares and the irrigation arrangements provided a water-supply for each square capable of allotment. It was intended to allow the grantee to arrange his fields as he pleased within his grant, but a lucky chance led to the issue of orders that all squares should be divided into 25 sub-squares which thus contain an area of 8 kanals 18 marlas or one acre and 18 poles. The manifest advantages of this system led to its immediate acceptance, and the sub-squares were called killas and the system killabandi. Killabandi has been adopted in the Lower Jhelum Colony, and is being introduced on the canals of the Triple Project in Gujrát, Gujránwála and Montgomery districts, but in place of the survey square a rectangle of 25 acres has been adopted providing killas of one acre each, and thus avoiding the calculation of all rates in terms of killas as well as of acres. One of the advantages of killabandi lies in the simplicity of the mapping work required for the cadastral map which, to a large extent, then consists of straight lines drawn across the map: and in the consequent ease with which the map can be kept up-to-date. This is fully recognised not only by the record staff, but by the cultivators themselves, and led to the introduction of killabandi into proprietary areas irrigated by the Lower Chenab and Lower Jhelum Canals. Here killabandi involves a complete re-partition of the village area according to the share of each proprietor. This is simple enough in the large estates in the uplands with few owners and much waste land, but in the lower and more developed villages towards the rivers, entails a considerable amount of minute attention to detail. The advantages of the completed work are, however, so patent that the trouble of the re-arrangement has been cheerfully acquiesced in: and the system is being introduced into proprietary areas on the canals of the Triple Project. An experiment on the same lines on the Western Jumna Canal area in Karnál was not popular with the more conservative owners of the south of the province and has been abandoned.

Records.

160. The record of title is known as the "jamabandi" or register shewing the distribution of the revenue, a function which it still performs. Each field has a separate number given to it which is shewn on the field map: and each plot of land lying in one spot in the occupation of one person or of several persons holding jointly and held under one title is ordinarily measured as a single field. In the jamabandi the fields in each estate are grouped by proprietary holdings (kháta khewat), and within each proprietary holding by cultivation holdings (kháta khatauni). A revised edition of the jamabandi is prepared for each estate every fourth year.

Mutation and crop registers.

161. The most important subsidiary registers which are necessary to keep the jamabandi up to date are the mutation register, in which changes in proprietary ownership and hereditary tenants are shown, and the crop inspection register (khasra girdáwari), in which, besides the record of the crop grown

each harvest in each field, changes in cultivating possession are also indicated. When a Revenue Officer visits a village he attests the mutations recorded in the mutation register, passing an order that they are accepted or rejected; and only the changes sanctioned by the Revenue Officer in a formal mutation proceeding are incorporated in the revised jamabandi.

The crop inspection register follows the order of the field numbers, no attempt being made in it to group the fields belonging to one proprietor together. A crop inspection is made by the patwari for each harvest. The patwari notes against each field the crop grown, and any changes in the cultivating possession which have occurred. In this way accurate crop statistics for each harvest are obtained, and any changes which have occurred in rights or possession or field boundaries are brought to light.

Note-Books.

162. The records thus prepared, besides their value in the revision of the jamabandi, form the basis of the statistical note-books which are prepared for each village. These note-books are arranged so as to enable the patwari to keep a continuous record of the statistics relating to each village during the course of the settlement. The statements kept up are the following:—

(*i*) The yearly register of area, showing for each year the total cultivated and uncultivated area, the class of cultivation with reference to the means of irrigation and the number of wells in use.

(*ii*) The crop returns of each harvest, showing the matured area of crops of different kinds at each harvest.

(*iii*) The yearly revenue account.

(*iv*) The yearly total of areas transferred, classified according to the nature of the transfer.

(*v*) A quadrennial abstract of ownership, mortgages and revenue assignments.

(*vi*) A quadrennial abstract of cultivating occupancy.

(*vii*) The statement of prevailing rents.

(*viii*) Statistics regarding the number of agricultural stock and carts and ploughs.

Similar books are kept in the Tahsil and District Offices.

Accuracy of records.

163. The present system of "annual" record and preparation of statistics is associated with the name of Colonel Wace, to whose initiative the reforms introduced from 1885 onward are due. It was the previous policy to undertake a revision of the map and record only when each district came under revision of the assessment. One of the objects of the reforms in land record work then introduced was to entertain a village record agency capable of maintaining up to date the village field maps and record registers, and thereby to obviate the necessity for general revisions at settlement. That the records are maintained in a high state of efficiency is shown by the confidence placed in them by land-owners and by the decreasing resort to written deeds and the registration procedure, where a mutation will suffice. The effects of the reforms has in recent years been tested at the revision of the settlement of the districts which have been settled under the new system. It has not been found possible to do away with the special revision entirely, though a greatly simplified process can be employed and map correction substituted for complete remeasurement. The attention directed to the comparative failure of the 1887 reforms has led to the issue of fresh instructions recently, having for their object the greater accuracy of the annual record work, and in particular of the supplementary maps, required to record changes in field boundaries and numbers. Now that the office of Settlement Commissioner has been abolished, the Director of Land Records has been associated with the record and mapping work in settlements, and a want of continuity in control which formerly obtained has been avoided. The amalgamation on one cadre of settlement and district staffs of revenue subordinates is a further step calculated to assist to remove the distinction between ordinary and settlement record work.

Annual record work.

164. The amount of record work performed in the province may be gauged from the fact that on the average in each district between 27,000 and 28,000 mutations are attested in the year, the figures running up to over 80,000 in the case of Hoshiarpur district, which is under settlement. Unsatisfactory

partition work frequently necessitates special revision at settlement, not only from the fact that partitions effected from year to year are not infrequently inaccurately recorded, but also because partitions are postponed until settlement because they will be more accurately and more expeditiously carried out by the special staff. This defect, however, is being gradually removed by continual insistence on the proper performance of their duties in this respect by the revenue staff.

Settlements.

165. With the exception of a few estates of which the revenue has been redeemed by the proprietors under a policy long since abandoned, the village assessments are revised from time to time, the term of settlement being usually thirty years in the case of fully developed districts and twenty years where conditions are less advanced. Reassessment has, hitherto, as explained usually, been accompanied by a special revision of the records, though the processes are quite distinct; and a general revision could not until recently be undertaken without the sanction of the Government of India. The rule laying down the standard of assessment is as follows:—"The assessment of an estate will be fixed according to circumstances, but must not exceed half the value of the net assets," a phrase which is defined as meaning "the average surplus which the estate may yield after deduction of the expenses of cultivation, including profits of stock and wages of labour." When the rents are fair competition rents, 50 per cent. of the rental is considered to be the measure of the half assets share of rented land and the rates ascertained from these rents for all classes of soil are applied to the whole cultivation, whether by tenants or by the owners. The ascertainment of the rental is a comparatively easy matter with our present records where cash rents prevail, but considerable difficulty is encountered in converting produce rents into a cash rate. The area of each crop is of course known, but estimates have to be made of the outturns of each crop, the actual share received by the landlord and the prices obtained by him for his produce; all of which, owing to the uncertainty involved, are probably usually under-estimated. In practice, it is recognized that there are many reasons which may justify a Settlement Officer in assessing below the maximum standard, but he is required to state as accurately as possible what the half net assets are, and to give good reasons for any proposal to fix the Government demand much below that standard. No particular fraction of the *gross produce* is prescribed as the limit of the land revenue demand, the only limit being that just mentioned, *viz.*, half the value of the net assets. The actual assessment nowhere exceeds one-fifth of the gross produce. It is more often equal to one-seventh, one-eighth, or even a smaller fraction. There is a marked tendency in the recent assessment policy of the Punjab to assess irrigation from wells with greater leniency than before, in consideration of the expenditure of capital and labour in constructing and working the well, and very liberal rules are now in force postponing the full assessment on new wells for a term of years and remitting part of the demand when the well falls in. Whether for cash or produce rent areas the present practice is for the Settlement Officer to submit his assessment proposals in a report dealing usually with a tahsil, through the Commissioner to the Financial Commissioners who pass the necessary orders which, after they have been submitted to Government for confirmation, are communicated to the Settlement Officer for compliance.

Forms of assessment.

166. The usual form of demand is an assessment fixed for a term of years and realisable (subject to suspensions and remissions) in good and bad years alike, but systems of fluctuating assessments, under which the harvest demand is ascertained by the application of sanctioned rates to the harvest area, have long been a feature of Punjab land revenue administration. Much progress has been made in recent years in the simplification and improvement of the rules under which the assessments are carried out and, since the last revision of settlement in Multán, increasingly large areas are assessed in this way, especially in the west of the province. Within the last ten years the fixed Government demand has dropped from Rs. 222 lakhs to Rs. 214 lakhs, while the fluctuating demand has in the same period risen from Rs. 31 lakhs to Rs. 71 lakhs. On these figures the percentage of the total demand assessed on the fluctuating principle has more than doubled in ten years, and now amounts to one quarter of the whole. It has, however, to be remembered that it is extremely difficult, in present circumstances of development, to obtain an idea of the normal fluctuating demand, and again that, though the fluctuating demand is generally collected in full, much of the fixed demand is suspended and eventually remitted.

5.—CIVIL DIVISIONS OF BRITISH TERRITORY.

Administrative divisions.

167. The present arrangement of the province for administrative purposes is as follows :—

Commissioners' divisions.	Executive districts.	Area in square miles.	Number of villages.	Population, 1911.	Tahsils.	Area in square miles.	Population, 1911.
DELHI ...	Hissar ...	5,213	1,007	804,889	Hissar ...	813	126,808
					Hánsi ...	803	167,963
					Bhiwáni ...	752	119,081
					Fatahabad ...	1,177	199,934
					Sirsa ...	1,640	191,103
	Rohtak ...	1,797	532	541,489	Rohtak ...	517	178,350
					Jhajjar ...	728	202,028
					Gohána ...	553	161,111
	Gurgaon ...	1,984	1,265	643,177	Gurgaon ...	411	112,312
					Firozpur-Jhirka ...	314	114,598
					Núh	401	128,599
					Palwal ...	381	136,572
					Rewári ...	423	151,096
	Delhi ...	1,290	773	657,604	Delhi ...	428	367,957
					Sonepat ...	451	173,345
					Ballabgarh ...	381	116,302
	Karnál ...	3,153	1,445	799,787	Karnál ...	837	225,717
					Pánipat ...	460	171,375
					Kaithal ...	1,273	250,917
					Thánesar ...	557	151,778
	Ambála ...	1,851	1,797	689,970	Ambála ...	369	195,385
					Kharar ...	372	133,283
					Jagádhri ...	406	140,299
					Naráingarh ...	485	112,447
					Rúpar ...	290	108,556
	Simla ...	101	25	39,320	Kot Khai and Kotgarh.	52	10,843
					Simla and Bharauli	33	28,477
	Total Delhi division	15,389	6,844	4,176,236	...	15,257	4,176,236
JULLUNDAR ...	Kángra ...	9,978	718	770,386	Kángra ...	429	119,628
					Dehra ...	516	126,525
					Nurpur ...	526	100,041
					Hamírpur ...	602	166,701
					Kulu ...	1,343	124,803
					Pálampur ...	444	132,688
	Hoshiárpur ...	2,247	2,179	918,569	Hoshiárpur ...	508	241,033
					Dasúya ...	501	208,865
					Garhshankar ...	511	236,814
					Una ...	716	231,857
	Jullundar ...	1,431	1,314	801,920	Jullundar ...	392	278,101
					Nawáshahr ...	302	176,738
					Phillaur ...	293	163,248
					Nakodar ...	368	183,833
	Ludhiána ...	1,452	905	517,192	Ludhiána ...	683	258,367
					Jagráon ...	417	146,659
					Samrála ...	289	112,166
	Ferozepore ...	4,286	1,615	959,657	Ferozepore ...	493	170,003
					Zíra ...	495	155,695
					Moga ...	807	224,985
					Muktsar ...	934	180,046
					Fázilka ...	1,339	228,928
	Total Jullundar division.	19,394	6,731	3,967,724	...	12,908	3,967,724

Commissioners' divisions.	Executive districts.	Area in square miles.	Number of villages.	Population, 1911.	Tahsils.	Area in square miles.	Population, 1911.
Lahore ...	Lahore ...	2,824	1,253	1,036,158	Lahore ...	730	465,878
					Chúnián ...	1,172	281,025
					Kasúr ...	813	289,255
	Amritsar ...	1,601	1,075	880,728	Amritsar ...	545	425,304
					Tarn Táran ...	597	271,970
					Ajnála ...	416	183,454
	Gurdáspur ...	1,889	2,365	836,771	Gurdáspur ...	496	224,515
					Batála ...	477	269,706
					Pathánkot ...	367	132,103
					Shakargarh ...	486	210,447
	Siálkot ...	1,991	2,524	979,553	Siálkot ...	433	283,489
					Pasrur ...	394	173,261
					Zafarwál ...	310	156,930
					Raya ...	486	194,275
					Daska ...	361	171,598
	Gujránwála ...	4,802	1,802	9234,19	Gujránwála ...	756	218,352
					Wazírabad ...	460	148,998
					Háfizabad ...	907	189,928
					Khángah Dográn	878	222,535
					Sharakpur ...	888	143,606
	Total Lahore division.	12,387	9,019	4,656,629	...	11,972	4,656,629
Ráwalpindi ...	Gujrát ...	2,357	1,508	784,011	Gujrát ...	569	304,778
					Khárián ...	646	265,268
					Phália ...	1,014	213,965
	Shahpur ...	4,791	1,068	648,989	Shahpur ...	609	142,225
					Khusháb ...	2,532	175,824
					Bhera ...	856	192,130
					Sargodha ...	807	138,810
	Jhelum ...	2,813	954	511,575	Jhelum ...	891	180,034
					Pind Dádan Khan	874	156,305
					Chakwál ...	999	175,236
	Ráwalpindi ...	2,010	1,293	547,827	Ráwalpindi ...	794	249,833
					Gujar Khan ...	569	148,575
					Murree ...	260	55,570
					Kahúta ...	452	92,849
	Attock ...	4,025	669	519,273	Attock ...	651	161,351
					Pindigheb ...	1,508	126,300
					Talagang ...	1,200	115,418
					Fatehjang ...	862	116,204
	Miánwáli ...	5,395	441	341,377	Miánwáli ...	1,548	138,380
					Bhakkar ...	3,142	135,127
					Isa Khel ...	678	67,870
	Total Ráwalpindi division.	21,391	5,933	3,353,052	...	21,461	3,353,052

Commissioners' divisions.	Executive districts.	Area in square miles.	Number of villages.	Population, 1911.	Tahsils.	Area in square miles.	Population, 1911.
Multan ...	Montgomery ...	4,649	1,385	535,299	Montgomery ...	1,402	93,798
					Gugera ...	780	97,770
					Dipálpur ...	996	197,310
					Pákpattan ...	1,330	146,421
	Lyallpur* ...	3,156	1,153	857,711	Lyallpur ...	1,247	398,244
					Samundri ...	984	264,556
					Toba Tek Singh ...	870	194,911
	Jhang* ...	3,363	986	515,526	Jhang ...	1,372	216,628
					Chiniot ...	1,016	183,966
					Shorkot ...	916	114,932
	Multán ...	6,107	1,446	814,871	Multán ...	953	262,937
					Shujabad ...	682	134,418
					Lodhrán ...	1,058	127,997
					Mailsi ...	1,657	122,906
					Kabírwála ...	1,605	166,613
	Muzaffargarh ...	6,052	937	569,461	Muzaffargarh ...	912	187,064
					Alípur ...	925	146,135
					Sannáwán ...	1,321	107,671
					Leiah ...	2,417	128,591
	Dera Gházi Khan	5,325	794	499,860	Dera Gházi Khan	1,456	181,908
					Sanghar ...	1,065	106,640
					Rájanpur ...	2,014	106,911
					Jámpur ...	895	104,401
	Total Multán division.	28,652	6,701	3,792,728	...	27,873	3,792,728
	Total British Punjab	97,213	35,228	19,946,369	...	89,471	19,946,369

[a] The district areas are taken from the figures of the Survey Department; those for tahsils from the revenue records.

* The combined area of Lyallpur and Jhang only has been supplied by the Survey Department. The district details have been deduced from the revenue records.

Sub-divisions have been constituted at Sirsa (Hissar), Kaithal (Karnál), Rúpar (Ambála), Kulu (Kángra), Fázilka (Ferozepore), Kasúr (Lahore), Sharakpur (Gujránwála), Sargodha (Shahpur), Pind Dádan Khan (Jhelum), Pindígheb (Attock), Bhakkar (Miánwáli), Pákpattan (Montgomery), Leiah (Muzaffargarh) and Rájanpur (Dera Gházi Khan): and special officers are deputed for the charge of hill stations of Kasauli (Ambála), Dalhousie (Gurdáspur), and Murree (Ráwalpindi). Sub-tahsils in charge of Naib Tahsildars exist at Tohána and Dabwáli (Hissar), Gúlah (Karnál), Kálka (Ambála), Nathána and Abohar (Ferozepore), and Bhalwál (Shahpur).

Size of districts and tahsils.

168. From the statement given above it will be seen that the average district contains 3,352 square miles, 1,215 villages, and a population of 687,806 souls. For the average tahsil the figures are 860 square miles, 311 villages, and 176,516 souls. There are on the average almost exactly four tahsils in each district.

Civil and sessions divisions.

169. The fourteen civil and sessions divisions are arranged as follows :—

Division.	Districts.	Division.	Districts.
Hissar	Hissar. Rohtak.	Gujránwála ...	Gujránwála. Montgomery.
Delhi ...	Gurgaon. Delhi.	Siálkot ... Jhelum ...	Siálkot. Jhelum. Gujrát.
Ambála ...	Karnál. Ambála. Simla.	Ráwalpindi ... Attock ...	Ráwalpindi. Attock. Miánwáli.
Hoshiárpur ...	Hoshiárpur. Kángra (without Kulu).	Shahpur ...	Shahpur. Jhang. Lyallpur.
Jullundar ...	Jullundar.		
Ludhiána ...	Ludhiána.		
Ferozepore ...	Ferozepore.	Multán ...	Multán. Muzaffargarh. Dera Gházi Khan.
Lahore ...	Lahore.		
Amritsar ...	Amritsar. Gurdáspur.		

The sub-division of Kulu forms a separate civil division, the Deputy Commissioner of Kángra being the Divisional Judge. Sessions cases from the Kulu sub-division, however, are tried by the Sessions Judge of Hoshiárpur. Similarly the Chakwál tahsil of Jhelum is included in the civil division of Ráwalpindi, but in the sessions division of Jhelum.

6.—DETAILS OF THE LAST CENSUS—TRIBES AND LANGUAGE.

I.—TRIBES.

General.

Classification.

170. The distribution of the population of the province among the various tribes and castes recognised by the census is disturbed by two main causes. Apart from the Pathans and Baloches, whose identification does not present any serious difficulty, it is usual to give separate returns for a few only of the landowning tribes of the province. The rest are all classed either as Jat or Rajput tribes. The difficulty arises from the circumstance that many of these tribes are of very obscure origin and that particularly in the west the assignment of a particular Muhammadan tribe as Jat or Rajput depends to some extent on the idiosyncrasies of the individual enumerator guided by the principle, generally accepted in the west, that a higher social position is occupied by the Rajput than by the Jat tribe. The second disturbing factor is that the caste names are the names of occupational as well as of caste or tribal groups and that the transfer from one occupation to another may or may not be taken by the enumerator as altering the caste classification also.

Main tribes and castes.

171. The annexed table shows the numbers belonging to each caste or tribe which at the census of 1911 comprised 1 per cent. or more of the total population of the province.

Caste or tribe.	1901.		1911.	
	Persons.	*Per mille.*	Persons.	*Per mille.*
All castes	24,754,737	1,000	24,187,750	1,000
Jat	4,941,658	199·6	4,956,536	204·9
Rajput	1,854,500	71·9	1,635,432	67·6
Chamar	1,208,434	65·6	1,128,704	64·0
Mochi	414,996		419,378	
Chuhra	1,304,661	52·7	925,535	51·1
Musalli	...	...	309,568	
Brahman	1,122,642	45·4	1,017,743	42·1
Arain	1,006,784	40·7	977,601	40·4
Tarkhan	681,300	41·7	646,330	40·1
Lohar	351,458		323,477	
Jhinwar	459,773	31·2	359,864	29·6
Machhi	236,384		279,666	
Mallah	76,029		77,837	
Arora	652,624	26·3	674,083	27·9
Jullaha	656,387	26·5	635,044	26·3
Gujar	631,524	25·5	610,472	25·2
Kumhar	569,115	23·0	550,450	22·8
Baloch	467,843	18·9	532,499	22·0
Khatri	436,472	17·6	432,727	17·9
Teli	321,505	18·6	295,971	17·7
Penjwand Kassab	139,305		132,849	
Awan	421,112	17·0	425,931	17·6
Bania	451,625	18·2	404,137	16·7
Kanet	389,857	15·7	403,815	16·7
Dhobi	147,253	15·3	156,046	14·6
Chhimba	151,517		129,338	
Lillari, Rangrez, Darzi	80,334		67,367	
Nai	376,238	15·2	350,456	14·5
Shekh	374,357	15·1	338,873	14·0
Pathan	263,897	10·7	292,417	12·1
Fakir	385,741	15·6	279,722	11·6
Sayad	238,227	9·6	247,388	10·2
Mirasi	247,701	10·0	227,394	9·4

Commentary on above.

172. The feature brought out by the above table, which accounts for over $\frac{4}{5}$ths of the whole population, is the retrogression, comparative as well as actual, in the tribes confined mainly to plague-stricken districts, of which the Brahmans and Banias are the most conspicuous example, and in the less exalted castes as for example the Chuhras and Chamars. This latter result may be due to the natural desire of members of those castes to pose as something higher, but plague has undoubtedly worked most havoc among the humbler folk of the Province. The sturdy Arora of the west and the Kanet of the hills are examples of increase unrestricted by plague mortality, and the variations among Jats and Rajputs are as much due to differences in classification of tribes, whose origin is uncertain, as to any real change in the comparative numbers.

The Tribes of the Punjab Proper.

Jats.

173. The Jats are in every respect the most important among the agricultural tribes of the Province: and in numbers alone comprise little short of 5,000,000 or one-fifth of the whole population. Under the general term are included the Ját of the south-eastern districts, the Jat of the Central Punjab and in the west the mass of the Muhammadan tribes which are below the Sayad, the Baloch and the priestly tribes and cannot substantiate a claim to Rajput descent. In the west indeed in common parlance the Jat is the husbandman much in the same way that the camelman is the Baloch. Here and elsewhere, as on the borders of Rajpútana, where the Jat comes in contact with the Rajput they have a somewhat inferior status, but in the central districts in which Sikhism is dominant they own no superior and are fully equal in social estimation to the Rajputs. Roughly speaking one-half of the Jats are Muhammadans, one-third Sikhs and one-sixth Hindus. In distribution they are ubiquitous, and are equally divided over the five divisions of the country, though they are less numerous in the Ráwalpindi division than elsewhere. Comparatively few Jats are found in the Himalayan tracts and in Attock district, but in Rohtak, Ludhiána, Muzaffargarh and Miánwáli they form more than one-third of the total population. In total numbers the Jats have been practically stationary since the previous census and now number 4,956,536, but the tribe as a whole has been a heavy sufferer from plague and an actual decrease has probably been concealed by difference in classification.

Rajputs.

174. Rajputs with a total population of over a million and a half like the Jats comprise many tribes of different religions, races and social systems. By religion they are now mostly Muhammadan, only about one-fourth being Hindus, while a very few are Sikhs. By race they include the ancient ruling tribes of the Jumna Valley, the Chauhan and Tunwar 'which gave Delhi its most famous Hindu dynasties': the Bhattis of the south and centre who have migrated from Bikáner and Jaisalmer into their present seats: the Syals of Jhang: and the Punwars of the south-west. In the northern or submontane districts the Rajputs also represent the old ruling tribes such as the Chibhs of Gujrát, the Janjuas of the Salt Range, and others, while in the Kángra district they preserve a very old type of Hindu aristocracy. Like the Jats the Rajputs are widely distributed over the province though there are few in Miánwáli, Muzaffargarh and Dera Gházi Khan. The greatest numbers are found in Ráwalpindi, Kángra and Jhang. The recent census shows a decline of 13 per cent. among the Rajput tribes, but the decrease is largely due to the separate classification of Ráthis, who were formerly returned as Rajputs. These Ráthis, 97,798 in number and by religion Hindus, are found exclusively in Kángra and Chamba where they stand between the Rajputs proper and the Ghiraths and Kanets who form the peasantry.

Gujars.

175. The Gujars are an important agricultural and pastoral tribe. They are most numerous in the eastern half of the Province and in the districts of the extreme north-west, especially in the district of Gujrát, to which they give their name. By origin they are, if language be a test, distinct from both the Rajputs and Jats, as their dialect is akin to the Mewári of Central India. In organization, however, they closely resemble the Jats, the tribes being equal in status *inter se*. Their absorption into Jat tribes may

account for the reduction in their present numbers which amounts to 3 per cent. in the decade: about one-fourth of the Gujars are Hindus and there are practically no Sikhs among them.

176. There are other tribes which, like those already described, are, or have been, dominant in parts of the Punjab. In the Salt Range tract their tendency is to claim Arab or Mughal, and throughout the rest of the Punjab, Rajput descent, while in the western plains they are often classed as, and hardly to be distinguished from, Jats. They may be divided into three groups. In the Salt Range we have the Gakkhars of the northern cis-Indus portion of the tract, the Awans of the Range itself, and the Khattars who lie between them. In the western plains we find the Khokhars of Jhang and Shahpur, one of the most widely spread of the Punjab tribes, very generally recognized as Rajputs; the Kharrals and Káthias of the Ravi, the latter being possibly the lineal descendants of the Kathaei, who, in their stronghold of Sángla, so stoutly resisted the victorious army of Alexander; and the Daudpotras of Baháwalpur to which State they gave at once a founder and a dynasty. In the eastern plains the group is represented by the Dogars of the Upper Sutlej and Beas; the Rors of Thánesar, whose home is on the great battlefield of the Mahabharat; the Tagas of the Lower Jumna, possibly the descendants of the Scythian Takas; and the Meos and Khanzádahs of the Northern Aravalis, probably of aboriginal origin, and the latter standing with respect to the former in a relation similar to that existing between Rajputs and Jats. With the exception of the Rors who are wholly and the Tagas who are partly Hindus the above tribes are Muhammadans. **Lesser dominant Tribes.**

177. Further tribes are found, important both in point of numbers and as including the most skilful husbandmen of the Province, which generally hold an inferior position among the agricultural community, and seldom, if ever, occupy the position of the dominant tribe in any considerable tract of country. First come the widely-distributed market-gardeners proper or growers of vegetables, represented by Mális in the Jumna zone, Sainis in the eastern submontane, Bághbáns or Maliárs in the Salt Range tract, and Arains almost throughout the cis-Indus Punjab. The last caste is the most numerous, and in the west they are little better than menials. The Arain of the Central Punjab, however, is recognised as one of the most skilful and industrious agriculturists of the Province. They were largely selected for the Chenab Colony, and Lyallpur now contains more Arains than any other district except Jullundur and Lahore. The Ghiraths are found in Kángra proper and the hills below it; while to the east the Kanets take their place. The Kambohs are probably allied to the Arains, and are found throughout the northern portion of the eastern plains, and in the middle valleys of the Sutlej and Jumna. The Mahtams of the central submontane and the whole valley of the Sutlej are probably of aboriginal stock, being in many parts still semi-nomad. The Ahirs are located in the south-eastern portion of the Delhi territory, where they once enjoyed considerable local importance. In the Punjab they have largely abandoned their hereditary occupation as herdsmen in favour of agriculture. The Gaddis of the Chamba Himalayas are a purely shepherd race and supposed to be of Khatri origin. Of the above tribes the Mális, Ghiraths, Kanets, Ahirs and Gaddis are Hindus, the Arains and Maliárs Muhammadans and the Mahtams Sikhs. The Sainis are both Hindus and Sikhs and Kambohs profess all three religions. **Minor agricultural and pastoral tribes.**

The Pathan and Baloch Tribes.

178. The Baloch element was not affected by the changes of 1901, the borders of the North-West Frontier Province having been devised to leave the Baloch tribes under the Punjab Government. The Baloches form the dominant race in Dera Gházi Khan district where they number 210,000 and Baloch tribes are found in considerable strength cis-Indus, in the Baháwalpur State and in the districts of Muzaffargarh, Multán, Jhang and elsewhere. Cis-Indus, however, the status of the Baloch is always far lower than it is in Dera Gházi **Baloches.**

Khan, and in Karnál, to the east of the Province, the Baloches have sunk to a criminal tribe. The total number of Baloches is now 532,499, an increase of 14 per cent. since 1901, when an increase of 18 per cent. for the previous decade was recorded.

The Baloch tribal system only exists in full force in Dera Gházi Khan, in which district the chiefs or *tumandars* still exercise considerable authority, controlled on the one hand by custom and on the other by the British administration. Under this system the Baloch has preserved his national characteristics of hospitality, courage and fidelity to his word. He remains a keen horseman, though comparatively few enlist in our cavalry regiments, owing to their home-keeping tendencies and their inability to endure the continuous restraint of regimental discipline. As Muhammadans they are free from bigotry, and are but little under the influence of fanatical *mullahs* or priests, in this, as in many other respects, contrasting favourably with the Pathans. Murderous outrages under the influence of religious excitement are exceedingly rare among the Baloches.

The history of the Baloch tribes is still obscure. They advance a claim to Arab descent which may have some foundation in fact, but all that can be said with certainty is that 'about the middle of the 15th century the Baloches, who had some 500 years earlier occupied the western confines of the Lower Sulemans, moved northwards and eastwards into the Punjab along the mountains and the Indus Valley, expelling Pathans from the former, and subjugating the Jat inhabitants of the latter. In 1555 a large body accompanied Humayun in his victorious re-entry into India, and so obtained a footing in the Punjab proper.'

Pathans.

179. The only tracts in the Punjab in which the Pathans form the dominant agricultural tribes are the Chach country in the Attock tahsil of the district of that name and in the Mianwali district, especially that portion which lies trans-Indus and constitutes the Isa Khel tahsil. The Pathan tribal system however only subsists in any force west of the Indus, and to the east of it the Pathan is well nigh as tractable as the Baloch or the Rajput. Pathans are found in all the districts and major states of the Punjab and, where not actually temporary immigrants employed in horse-dealing, labour or trade, are or claim to be descendants of families that have reached their present abodes in the train of conquering invaders. Large numbers are found in the Delhi and Lahore districts, but in all these cases the Pathans are hardly to be distinguished in character or customs from the Muhammadan peasantry among whom they now dwell. Even so the Pathan element in the population does not amount to more than 1·2 per cent. of the whole and comprises all told no more than 292,417 souls, an increase of 4 per cent. on the figures of the previous census.

Priestly and Religious Castes.

Brahmans.

180. Brahmans are represented in every district of the Punjab, as Hindus are found throughout the Province. They are most numerous however in the Himalayan area and represent 14 per cent. of the population in Kángra. In the Delhi and Jullundur divisions generally they are widely represented, the proportion rising to 10 per cent. in Rohtak, but in all the western districts they are numerically weak. In total numbers they have fallen by 10 per cent. and now barely exceed one million, for plague has taken terrible toll among them. The Brahman in the Himalayas and in the east of the Province is often a landholder and in that capacity hardly exercises any spiritual or ceremonial functions, whereas in the west he is almost invariably a dependent of the Hindu trading castes.

The Brahmans are divided into two great territorial groups,—(*i*) the Gaur who are only found in any numbers east of a line drawn through Simla and Patiála, *i.e.*, in the basin of the Jumna, and (*ii*) the Sarsut, the Brahmans of the Punjab proper and *par excellence* of the Khatri and Arora castes.

The social status of the Brahman depends primarily on the status of the caste, or section of a caste, to which he ministers. Thus the Brahman of the Khatri ranks higher than the Brahman of the Arora, while the Chamarwa or Chamárs' Brahman stands entirely outside the pale of Brahmanism just as the Chamár is beyond the pale of Hinduism. But further the status of a Brahman depends on occupation, for those who receive inauspicious offerings, or are employed on occasions of death, form lower sub-castes, such as the Acháraj, the Sawni, the Vedpátr and the Dakaut. As a body the Brahmans appear to be retrogressing in wealth and influence, and, as they find a difficulty in living on the alms they receive as spiritual guides, are taking increasingly to secular pursuits.

Sayads and Kureshis.

181. Among the Muhammadans the Sayads and Kureshis occupy a position somewhat analogous to that of the Brahmans in the Hindu community and they also are largely landholders especially in the west. The Sayads and Kureshis comprise groups of very diverse origins. In the south-west and occasionally elsewhere are to be found families with well-founded claims to be descended from the tribe of the Prophet, but the claim to Sayad or Kureshi origin is very generally advanced by families which profess a saintly character or supernatural powers. The Sayads now number 247,388 souls and show an increase of 4 per cent. since the previous census. They are very widely distributed, but are actually strongest in the Ráwalpindi division. Kureshis number 70,922 and have increased over 30 per cent. in the decade. These figures exclude such tribes as the Chishtis and Bodlas who claim Kureshi origin. Kureshis are confined exclusively to the Lahore, Ráwalpindi and Multán divisions, and as in the case of the Sayads are most numerous in Ráwalpindi division.

Religious orders.

182. There are further a number of religious orders, usually celibate in theory, but by no means rigorously so in practice. These orders thus tend to form *quasi* religious castes and it is impossible to draw any line between those who are members of an order and those who are members of the caste which bears the same name as the order. These orders were returned to the number of 280,000 all told (of whom 97,000 were females) as Fakirs by caste of whom the Muhammadan Madáris and Hindu Bairágis were the most numerous. In addition to these, Bairágis returned as such numbered 38,000 and Jogis over 54,000 souls. The difficulty in classification possibly accounts for the reduction from the figures of 385,000 Fakirs returned in 1901.

The Mercantile Castes.

Hindu castes.

183. The Hindu trading castes fall into three main groups,—(*i*) the Khatris, in the central and more especially the north-western districts of the Province, (*ii*) the Aroras, in the south-west, and (*iii*) the Banias of the south-east. Other but less important groups are the Bhátias, confined to the western districts, the Suds and Bhábras, found only in the sub-Himalayan districts, and the Pahári Mahájans and Bohras of the Himalayan area.

The Khatris (432,000) stand highest in the social scale. They are a distinctively Punjab caste, and have a remarkably complex social system. Though they gave Sikhism its founder and most of its great religious leaders, they are mostly Hindus, only the sections to which the Sikh leaders belonged being, as a rule, Sikh by religion. The Aroras (674,000) claim a Khatri origin, but the point is a doubtful one, as in many respects their customs are different, though their social organization closely resembles or imitates that of the Khatris. The Banias of the Punjab are mainly of the Agarwal sub-caste, a few Saráliás and Oswals being found. Their organization is in marked contrast to that of the Khatris, and they form in reality a great occupational group divided into several sub-castes, based on sectarian differences, of which the Mahesri or Sivaites are in example. The Bhátias (23,000) are an immigrant caste of traders from Western Rájpútána, while the Bhábras (11,000) and Suds (20,000) are probably indigenous to the Punjab, the former being mainly Jains.

The Khatris, and indeed most of the trading castes, are not, however, exclusively traders, but are found in most of the learned professions and in Government service, and they also engage in banking and money-lending. Of the Hindu castes the most progressive appear to be the Agarwal Banias and the Aroras, the rigid social system of the Khatris apparently militating against their advance as a body.

Muhammadans.

184. The principal Muhammadan trading "castes" are the Khojas, Paráchas and Khakhas of the west, but other Muhammadan castes such as the Pathans, Shekhs and Kashmiris also engage in trade. The term Khoja of Persian origin is conferred upon converts of all classes though it is usually confined to Khatris, Aroras, Brahmans and Bhátias who have accepted Islam. Khakha is somewhat similarly used. The Arabic term Shekh, which does not in the Punjab denote a caste, is the title usually assumed by converts to Muhammadanism whose original Hindu caste was not very high. Shekhs have fallen off by 10 per cent. in the last decade, but including them the castes noticed above number some 406,000 souls.

Artizan and Menial Castes.

General.

185. The menial classes include the unclean castes, like the Chuhras, or sweepers who stand outside the pale of Hinduism and who can only rise in the social scale by abandoning their hereditary calling and becoming Muhammadan converts, modern Sikhism offering little opportunity to the lowest castes to rise in social position. There is, however, but little doubt that the definite abandonment of a lower for a higher occupation leads, sooner or later, to promotion in the scale of castes, even amongst the Hindus, and this fact renders it impossible to form any conclusions as to the relative progress of the various castes, for a decrease in the numbers of any given group may simply mean that many of its members have adopted a new pursuit or handicraft and been received into a higher caste. Conversely, it not infrequently occurs that fragments of the dominant castes are driven by circumstances to take to a trade or handicraft, and are gradually absorbed into its caste. This process must have been exceedingly common in former times when sudden political changes were frequent, and thus the modern lower occupational castes comprise many diverse elements, a fact which explains the extraordinary complexity of the social groups.

Artizan castes.

186. The highest of the artizan castes are the Tarkháns or carpenters and Lohárs or smiths, who are practically indistinguishable. The caste comprises skilled mechanics many of whom are rising under British rule to the status of a professsional class as trained engineers.

The Hindu Chamár, Sikh Ramdásia, and Muhammadan Mochi are the great leather-working castes: and the Julláha, often called Paoli in the west, is the weaver of the Punjab. It is, however, impossible entirely to separate these castes from the Chuhra, for south of the Sutlej the term Chuhra-Chamár is applied to the two castes collectively, the idea apparently being that working in leather defiles, so that the Chamár too is not within the pale of Hinduism. Impurity is, however, a question of degree, and the Chamárs have several subcastes, of which one, the Bauna, consists of weavers. Similarly Mochi-Julláha is used of the leather-working and weaving castes collectively. The Chamárs and Mochis together form the most numerous of the artizan castes in the province and number over 1½ millions. The Kumhar or potter is not generally higher than the above in the social scale. He is most numerous where well-irrigation is most largely practised.

Menial castes.

187. Among the menials the Nai is an important functionary as he is a leech or surgeon as well as barber, while in the latter capacity he acts as an ambassador or as a go-between on formal occasions. The numbers (350,000) testify to the usefulness of the Nai in the community. The Dhobi or washerman, the Darzi or tailor, the Chhimba or calico-printer, the Lillári or dyer in blue, and the Rangrez or dyer in red, constitute a group separated only by distinction of occupations, which are all combined by the Charhoa in the south-western districts. Similarly the Teli or oilman can hardly be separated from

the Penja or cotton-scutcher and Kassáb or butcher, all these occupations being com monly followed by the same person. Again the Hindu Jhinwar (or Dhinwar) the water-carrier is so called when he acts in that capacity. He is also known as a Mahra but as a bearer of burdens he is called a Kahár and if a cookshop keeper or grain parcher Bhatiára or Bharbhunja. If a Muhammadan the water-carrier is called Máchhi. In the Himalayas the organization is somewhat different. In the low hills the Barára and Batwál perform general menial service, the Meg weaves and works in leather, and the Dumna scavenges and works in grass; while in the higher hills the Koli, Dágí and Chanál, as they are called almost indifferently, perform all menial offices.

Scavenger castes.

188. The Chuhras, called throughout the west of the Punjab Musallis or Kutánas when Muhammadans, are returned as of all religions. The Sikh Mazbi is by origin a Chuhra, who has, for some few generations at least, observed the ordinances of Sikhism, and abandoned the most degrading of the Chuhra's functions, so that he should be regarded as a degree above the scavenger castes. The Chuhra is an indispensable element in the village community of the eastern Punjab, but not so in the west, where the sweeper is often not to be found, and in consequence but few are returned in the districts on the Indus. In the Central Punjab this caste probably furnishes more agricultural labourers than sweepers, and they are very largely employed in this capacity on the Chenab Canal. Those who have taken permanently to working in leather or weaving have doubtless for the most part been returned as Chamárs or Julláhas. Chuhras and Musallis now number 1,235,000.

Miscellaneous Tribes.

Foreign races.

189. A few tribes such as the Mughals, Arabs and Turks still preserve names of a foreign origin. The Mughals number 98,000 souls and may be regarded as in the main descended from the Mughal armies which invaded India. They are somewhat widely distributed, but are most numerous in the Ráwalpindi and Jhelum districts, which lie on the track followed by the Mughal armies.

Peddlers and carriers.

190. The Banjáras and Labánas are the travelling traders of the sub-montane tracts, the former being found in the east and the latter in the west, while there is a considerable colony of Labánas on the Lower Indus in Muzaffargarh. The two castes are probably the same people under different names.

Minor professional castes.

191. The Mirási is the family genealogist in Muhammadan tribes and also acts as a bard, a profession also followed by the Bháts and certain other minor castes. The Mirásis are numerous (227,394) and in the west at least occupy a low position in the social scale. The Bahrupias and Bhands are hereditary actors.

Vagrant criminal and gipsy castes.

192. The vagrant population includes large elements like the religious mendicants, which form no part of vagrant or gipsy tribes. Moreover, the latter are not always criminal, nor, on the other hand, are the criminal tribes always vagrant. Thus the vagrant tribes comprise the Ods, the Beldars and the Changars, all of whom are navvies and non-criminal. Other vagrants are the Báwarias on the middle Sutlej, the Aheris and Thoris of the eastern districts on the Rájpútána border, who are hunters, and the Jhabel, Kehal and Mor tribes of the lower Indus Valley, who are fishermen. These, with the exception of the Báwarias, may also be regarded as in the main non-criminal. Essentially criminal tribes are the Báwarias, the Harnis and the Sánsis of the centre and sub-montane districts, the Minas of Gurgaon, the Baloches and Tagus in Karnál, the Mahtams especially in Lahore, and the Pakhiwáras and Bháts in Siálkot, all of whom are under the operation of the Criminal Tribes Act. These tribes, though criminal, are however not always 'vagrant,' as many of them own land.

The gipsy tribes are the Nats, Bázigars, Pernas and Kanjars and in the hills the Hesis, all of them wandering minstrels, acrobats and prostitutes.

II.—LANGUAGE.

The languages of the people.

193. Dr. Grierson's classification in his Linguistic Survey of India has been followed in the census tabulation of languages. Every effort was made to secure scientifically accurate results, and the effect on the final figures of the agitation which arose over the return of persons speaking Urdu, Hindi and Punjabi, respectively, is believed to have been insignificant. The final figures are as follows:—

TOTAL POPULATION			24,187,750
TIBETO-CHINESE FAMILY.			
Tibeto-Burman sub-family.			
Tibeto-Hamalayan Branch	8		
Assam-Burmese Branch—			
Tibetan Group	10,737		
Pro-nominalised Himalayan Group ...	30,870		
		41,607	
			41,615
DRAVIDIAN FAMILY			459
INDO-EUROPEAN FAMILY.			
Aryan sub-family.			
Iranian Branch—			
Baluchi	70,675		
Pashto	67,174		
			137,849
Indian Branch—			
Non-Sanskritic sub-branch	7,216		
Sanskritic sub-branch ...			
Sanskrit Group	4		
North-West Group—			
Lahndi	4,253,566		
Sindhi	24,166		
		4,277,732	
Southern Group	815		
Eastern Group	2,222		
Western Group—			
Western Hindi ...	3,826,467		
Rajasthani	725,850		
Gujarati	1,964		
Punjabi	14,111,215		
Western Pahari ...	993,363		
		19,658,859	
Northern Group		10,092	
			23,956,940
UNSPECIFIED GIPSY LANGUAGES			12,136
VERNACULARS OF OTHER ASIATIC COUNTRIES			2,745
EUROPEAN LANGUAGES			36,006

In another classification the vernaculars of the province are spoken by 24,084,207 persons. Punjabi, the main language of the Punjab, is spoken by 583 *per mille*, Lahndi (or Western Punjabi) by 176, Western Hindi by 159, Western Pahari by 41, Rajasthani by 30, Baluchi and Pashto each by 3, Tibeto-Burman and European languages each by 2 and Sindhi by 1.

Comments on the foregoing table.

194. The Tibeto-Burman dialects are the speech of the north-eastern corner of the province, the chief instance being Kanauri, the language of Bashahr State.

Of the Iranian languages Baluchi shews an increase of 9 per cent. and Pashto of 27 per cent. over the figures of the last census. Baluchi is only spoken in Dera Gházi Khan (including the trans-frontier) and in Bahawalpur: Pashto in parts of Attock and Mianwáli. Compared with the increase in the Baloch and Pathan population respectively, Baluchi appears to be losing and Pashto to be gaining ground. The non-Sanskritic Indian language spoken in the province is Kashmiri spoken by immigrants chiefly in Ludhiana, Lahore and Amritsar.

Lahndi is the language of the north and west of the province, a line from Jhelum town to Pákpattan in Montgomery being roughly its eastern limit. The name, though appropriate, meaning the setting sun, is not in use locally. The language has numerous local designations indicating differ-

ences of dialect, the chief of which are Dheráwal, Baháwalpuri, Multáni, Hindki, Jatki, Pothwari, Thalochri, Jangli, Dhanni and Ghebi. Sindhi, a closely allied tongue, is spoken as a local dialect in the south-west corner of Baháwalpur. Mr. Grierson divides Lahndi into three groups—(1) the southern (standard dialect), (2) the north-east (Pothwari, &c.) and (3) the north-west (Dhanni, &c.); but the grouping is tentative, and no attempt to allocate dialects to groups has been made at this census. Of the languages of the important Western Group, Western Hindi includes Hindustani (1,553,301), Urdu (494,290) and other Hindi (1,778,876), and is the dialect of the Delhi Division and included States: Hindustani is the rural language in Delhi, Karnál and Ambála districts and other Hindi elsewhere, while Urdu is the polished language of the towns both in this part of the Province and generally. The distinctions, however, between these dialects are not clearly defined. Rajasthani, as the language of Rajputána, fringes the boundary of the Province from Baháwalpur to Gurgaon and includes the Bágri of Hissar, Ferozepore and Patiála and the Mewati of the Gurgaon Meos. Punjabi is the dialect of the Central Punjab plains and under present classification includes the Dogri of the Kángra Hills and the adjoining districts of Siálkot and Gurdáspur, though some authorities classify Dogri as Western Pahari. The plains language is differentiated as "Standard Punjabi." It is not easy to differentiate between some forms of Punjabi and of Lahndi. Western Pahari is spoken in the Simla Hills, in Chamba and parts of Kángra. Four groups are recognised by Dr. Grierson—the Simla group (405,008), Kulu group (122,970), Mandi group (237,377) and Chamba group (136,138), respectively, to which must be added the Murree Kahuta group (73,981), Gujari (16,526) and an additional 1,363 using dialects not allocated to any of these groups. Of the Indian language groups of little importance in the Punjab, the southern is represented by Marathi, the eastern by Bengali and the northern by Central Pahari (Garhwali) and Eastern Pahari (Naipali), the language of the Gurkhas.

The interesting Gipsy languages are mainly used for secret conversation. The chief patois returned in the census are Odki, Labanki and Bawaria spoken by the Ods, Labanas and Bawarias. There are many speculations as to the origin of these languages, but no theory as yet commands universal favour.

Some account of the dialects spoken by the tribe of hereditary criminals and the "argots" of the Báwarias, Sansis, Harnis, Baluchis and Bhats will be found in Mr. Vivian's "Handbook of the Criminal Tribes of the Punjab" published by the Punjab Government Press in 1912.

General.

195. Owing to alterations in classification and greater care in the preparation of the returns, any comparison of the language returns with those of previous enumerations is unsatisfactory. In general it may be said that Lahndi-speaking peoples have in the past frequently been returned as Punjabi speaking, and even now the Lahndi-speaking population is for the same reason probably underestimated. A decrease in the present return of Punjabi-speaking peoples and increase under Lahndi is thus explained. An actual decrease in population in the Punjabi and Western Hindi tracts has also led to a decrease under these languages. There is, or seems to be, no correlation between dialect and caste. Locality and status appear to be the chief factors influencing speech.

7. Changes in the Administration.

Personnel of the Administration.

196. The Hon'ble Mr. (now Sir) James McCrone Douie, C.S.I., First Financial Commissioner, officiated as Lieutenant-Governor from the 28th of April to 5th of August 1911, during the absence on leave of Sir Louis Dane.

Administrative changes.

197. The most important administrative event of the year was the announcement of the transfer of the seat of the Government of India from Calcutta to Delhi, the reasons for the transfer being set forth in the despatch of the Government of India, dated 25th August 1911, and the despatch of His Majesty's Secretary of State, dated 1st November 1911.

The tahsils of Dipálpur and Pákpattan, in the Montgomery district, were constituted, with effect from the 1st May 1911, into a Sub-division entitled the Pákpattan Sub-division, with head-quarters at Pákpattan.

Seventy-seven estates and rakhs of the Bhera tahsil of the Shahpur district were transferred to the Phália tahsil of the Gujrát district, with the double object of lightening the charge of the Deputy Commissioner of Shahpur, and of collecting together within the limits of the district of Gujrát all the areas to be irrigated by the new Upper Chenab Canal.

8. Relations with Tributary States and frontier affairs.

General.

Census.

198. A census was taken of the Native States on the night of March 10th 1911, concurrently with that taken in British India. The arrangements were under the Superintendent, Census Operations, Punjab, and the results are tabulated in the provincial report. For the States, as a whole, the population, which had grown 3·8 per cent. between 1891 and 1901, shewed a decline since 1901 of 4·8 per cent. The variations by individual States are given in subsequent paragraphs. Briefly speaking increases are shown in States which had suffered from famine migration in 1901 or have not been severely visited by plague since that date. Important decreases, as for instance in Nábha, Kapúrthala and Patiála, are largely due to plague. The only towns with population exceeding 10,000 are Patiála (46 974), which has shrunk considerably, Málerkotla (23,880), Narnau (Patiála, 21,350) Baháwalpur (18,414), Kapúrthala (16,367), Gobindgarh or Bhatinda, (Patiála, 15,037) Nábha (13,620), Phagwára (Kapúrthala, 11,779), Farídkot (11,673), Basi (Patiála, 11,125) and Kot Kapúra (10,644).

Imperial Service Troops.

199. Imperial Service Troops are maintained by eight States. The Patiála Contingent consists of a regiment of cavalry and two battalions of Infantry; Jind, Nábha, and Kapúrthala each maintain a battalion of Infantry, and Baháwalpur a Transport Corps, with a mounted escort of camelmen, while Farídkot, Málerkotla and Sirmúr furnish a company of Sappers apiece. No State in India, except Gwálior and Kashmír, furnishes a larger contingent than Patiála.

I.—Phulkian States and Bahawalpur.

Patiala.

Area 5,412 square miles; population (1911), 1,407,659; gross revenue, Rs. 82 lakhs; army and police, 5,297; Chief, Sir Bhupindra Singh, G.C.I.E., Sidhu Jat, aged 21; has no male heir; title, Maharaja; salute, 17 guns.

Nizamats.	*Area, square miles.**	*Population.*	*Tahsils.*
Ramgarh ...	1,835	425,324	Patiala, Bhawánigarh, Sunám, Narwána.
Pinjaur ...	825	183,314	Pinjaur, Rájpura, Banur, Ghanaur.
Amargarh ...	855	265,138	Amargarh, Fatehgarh, Sáhibgarh (Pail).
Anáhadgarh ...	1,836	379,971	Anáhadgarh, Bhikhi, Govindgarh.
Mohindargarh	576	153,912	Mohindargarh, Narnaul.

General.

200. The Maharaja went to England for the Coronation and was there from May to August. He was at Delhi for the Durbar, at which he received the G.C.I.E., and at Calcutta for Christmas. Their Excellencies the Viceroy and Lady Hardinge visited the State at the close of the year.

Administration.

201. There were no changes in the administration except that the Maharaja himself became Commander-in-Chief, on the retirement of Sardar Hira Singh, with Sardar Bakhshish Singh as Military Secretary. To help the Home Minister Lala Chiman Lal, Barrister-at-Law, was appointed Judicial Secretary. The Chief Minister, the Hon'ble Khan Zulfikar Ali Khan, received the C.S.I. at the Durbar.

* By Revenue Records.

Finance. 202. The expenditure of the year was slightly larger than the income, but this was due to several heavy items of expenditure, *viz.*, the contribution to the King Edward Memorial, the Maharaja's visits to England and Calcutta and the Coronation Durbar. The land revenue was collected in full without much difficulty and the Rajpura-Bhatinda Railway continued to pay the State well. The rate of interest on the capital expenditure amounted to 5½ per cent. Only one instalment of the Government loan to the State remains to be paid.

Agriculture. 203. The kharif on irrigated lands was fairly good, but the unirrigated crops largely failed. There was a scarcity of fodder in consequence and the condition of the cattle suffered. The later rains were good for the rabi and a large area was sown, but owing to the failure of rain in February the outturn on unirrigated land was disappointing. The irrigated area of the year is reported to be 50 per cent. more than in the previous year.

Settlement. 204. Orders have been passed as to the method of settlement of the hill forests and the settlement has been started.

Public health and census. 205. The public health has been fairly good; there was little malaria and less plague than usual. The census of 1911 shewed a decrease of population compared with that of 1901 of 189,033; about 12 per cent.

Departments. 206. The administration of the various departments was eminently satisfactory. In the Public Works Department the electric high tension scheme was completed and the city and civil station main roads at Patiála have been lighted by electricity.

Bahawalpur.

Area, 15,000 square miles; population (1911), 780,641; gross revenue, Rs. 35 lakhs; army and police, 1,897; Chief, Sadiq Muhammad Khan, Abbasi V, Daudpotra, aged 7; has no male heir; title, Nawab; salute, 17 guns.

Nizamats		*Area square miles.**	*Population.*	*Tahsils.*
Minchinabad	...	3,528	217,897	Minchinabad, Nahr Sadikiya, Khairpur.
Baháwalpur	...	7,079	305,186	Baháwalpur, Ahmadpur, Allahabad.
Khanpur	...	5,311	257,558	Khanpur, Naushahra, Ahmadpur Lamma.

General. 207. The Nawab visited Chàil in the summer at the invitation of the Maharaja of Patiala: later in the year he attended the Durbar and spent a few days in Lahore. His Highness, who is only seven years old, was placed from December 1st in the charge of Major Mackenzie, I.M.S., who was appointed as his guardian and also as medical adviser of the State. With this exception there was no change in the Administration of the State by the Council, one member of which, Muhammad Abdul Rahman Khan, received the title of Khan Bahadur. His Excellency the Viceroy saw the Nawab in April at Dera Nawab and His Honour the Lieutenant-Governor visited the State in April and laid the foundation stone of the market at Chachran.

Finance. 208. In spite of several extraordinary items of expenditure the income of the State exceeded the expenditure of Rs. 30½ lakhs by Rs. 4½ lakhs. The Council by careful saving is accumulating a large balance with a view to paying the State share of the cost of the hoped for Beas-Sutlej Canal. The Khanpur-Chachran Railway is not paying so well as was expected and steps are being taken to remove the difficulties, including the construction of a market at Chachrán. The land revenue collections were fair, but over a lakh of rupees of arrears of revenue and takavi are still outstanding.

Agriculture. 209. The kharif was below average, but the rabi crop was a good one. Several of the inundation canals failed and caused considerable loss. On some of the canals the "abiana" system of cash payment for water has been introduced and it is proposed to abolish the "cher" system of forced labour altogether as unfair and unsatisfactory.

* By Revenue Records.

Settlement and Colonization.

210. The assessment of the Cholistan (desert) was completed and sanctioned in December 1911. The demand was raised from Rs. 57,000 to Rs. 97,000. The Sharkia Sadikia Canal has been completed and will irrigate a portion of the desert. It is proposed to sell a part of the area by auction and to colonize part. A colonization officer has been appointed and sent to Lyallpur to learn something of the work.

Public health and census.

211. The public health was on the whole good, but there was some mortality from small-pox. The population has increased in the last ten years by 59,764, or over 8 per cent.

Progress.

212. There are signs of progress in the State. The Council are striving hard to purify the administration and to increase efficiency. The Sadiq-Dane High School was formally opened by the Political Agent during this year.

JIND.

Area, 1,259 square miles; population (1,911), 271,728; gross revenue, Rs. 19 lakhs (including Rs. 3 lakhs extraordinary) ; army and police, 1,745 ; Chief Sir Ranbir Singh, K.C.S.I., Sidhu Jat, aged 33 ; has no male heir; title, Maharaja ; salute, 11 guns. The State is divided into the tahsils of Sangrur, Jind and Dadri.

General.

213. The Maharaja was at Delhi for the Durbar where he received the hereditary title of Maharaja. There were no changes of importance in the administration. The Chief Minister, Sardar Bahadur Sardar Shamsher Singh, received the C.I.E. at the Durbar.

Finance.

214. The income and expenditure almost balanced at Rs. 19 lakhs. The income was unusually high owing to increased revenue from irrigation, but on the other hand there were unusual items of expenditure. A reserve of Rs. 14¾ lakhs is set aside for the Jind-Panipat Railway, sanction to which is still awaited. The Ludhiána-Dhúri-Jákhal Railway paid the State some 7 per cent. on the capital expenditure. Practically the whole of the land revenue demand was collected.

Agriculture.

215. The kharif, except on irrigated land, was a failure, but owing to good rain in November a large rabi area was sown, which, however, gave a disappointing yield. The scarcity of fodder affected the condition of the cattle, and there was considerable mortality among live stock from foot and mouth disease. The irrigation from the Western Jumna and Sirhind Canals was largely in excess of the previous year's results. Co-operative credit societies continue to make headway.

Public health and census.

216. The public health was fairly good. The decrease in the population of the State in the last decade amounts to 3½ per cent.

NABHA.

Area, 928 square miles ; population, (1911), 248,887 ; gross revenue, Rs. 17 lakhs ; army and police, 1,485 ; Chief, Ripudaman Singh, Sidhu Jat, aged 29 ; has no male heir; title, Maharaja ; salute 11 guns. The State is divided into the three nizamats of Amloh, Phúl and Báwal.

General.

217. Maharaja Sir Hira Singh died on December 25th, 1911. He had visited Simla in the previous summer and exchanged visits with His Excellency the Viceroy and His Honour the Lieutenant-Governor. He was present at Delhi for the Durbar, and was granted the honour of visiting His Majesty the King Emperor, but was too ill to attend the Durbar itself. The Chief of the State was, however, honoured by the conferment of the hereditary title of Maharaja. At the time of his father's death, Tikka Ripudaman Singh was in France, but returned to his State in the middle of January.

Administration.

218. The present Maharaja has retained the three councillors who assisted his father in the administration of the State.

Finance.

219. The Durbar has a good deal of money invested in buildings at Simla and in banks and factories. Sanction has been asked for for a new railway from Jagraon in Ludhiána through Barnála to Hissar.

220. The rabi and irrigated kharif crops were average, but the cattle suffered from want of fodder. An Agricultural Department has been formed and placed in charge of a young man who was trained in England at the expense of the State. Agriculture.

221. The public health was on the whole good. The State however has decreased in population since 1901 by 16½ per cent. The execution of a scheme for relieving the water-logging of Nabha town has been suspended at the request of the present Maharaja as he has other ideas. Public health and census.

II.—States of the Jullundur Division.

KAPURTHALA.

Area, 630 square miles; population (1911), 268, 133; gross revenue, Rs. 14 lakhs*; army and police, 1,341; Chief, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia, aged 39; has a male heir; title, Maharaja; salute, 11 guns; tribute Rs. 1,31,000. The State is divided into the five tahsils of Kapúrthala, Dhilwan, Bholath, Phagwára and Sultánpur.

222. His Highness spent a portion of the summer at Mussoorie and a fortnight at Simla; at the Durbar the G.C.S.I. was conferred upon him and the hereditary title of Maharaja. General.

223. Mr. L. French, I.C.S., continued to serve the State as Chief Minister, his services being retained for a further period of three years. No important changes were made in the administration. Administration.

224. Plague prevailed in all the tahsils of the State, the epidemic being severest in the Kapúrthala tahsil. The deaths from plague recorded amount to 3,362. Cholera also visited the Phagwára tahsil. The census returns shew that the population of the State has declined by 14½ per cent. in the last ten years. Public health and census.

MANDI.

Area, 1,200 square miles; population (1911), 181,110; gross revenue, Rs. 5 lakhs; army and police, 691; the Gaddi vacant; tribute, Rs. one lakh. The State is divided into the four tahsils of Nagar-Mandi, Chacheot, Gopálpur and Harabagh.

225. Raja Bhawani Sen attended the Coronation Durbar and fell ill soon after his return. His condition became worse towards the end of January and he died on February 9th, 1912. The loss to the State by his untimely death is severe. His Highness died without issue, and Mr. Gordon Walker, I.C.S., the Settlement Officer, was put in charge of the State pending the selection of a successor. General.

226. The income and expenditure balanced at some Rs. 5,19,000. Rs. 77,246 were received by the State from the sale of salt, the mines being worked by a contractor. Finance.

227. A revenue settlement of the State is in progress. Mr. Garbett, I.C.S., the Settlement Officer, was obliged to proceed on sick leave in October 1911, and was succeeded by Mr. Gordon Walker. Settlement.

228. The crops were good and the health of the people satisfactory. Since the previous census the population has increased by 4 per cent. Public health and census.

SUKET.

Area, 420 square miles; population (1911), 54,928; gross revenue, Rs. 2 lakhs; army and police, 101; Chief, Bhim Sen, Rajput; aged 27; has no male heir; title, Raja; salute, 11 guns; tribute, Rs. 11,000.

229. The Raja continues to take a personal interest in the affairs of the State, but the financial condition requires careful attention. Public works on a considerable scale have been undertaken at the capital. The general health of the people was good. The population has remained stationary during the decade. General.

*Exclusive of some Rs. 13 lakhs derived by the Maharaja from his Oudh estates.

MALER KOTLA.

Area, 167 square miles; population (1911), 71,144; gross revenue, Rs. 9 lakhs; army and police, 587; Chief, Ahmad Ali Khan, Bahadur, Pathan, aged 31; has a male heir; title, Nawab; salute, 11 guns.

General. 230. His Highness was present at the Coronation Durbar.

Finances. 231. The total income of the State was Rs. 8,96,154 and the expenditure Rs. 6,92,968, but the financial condition is notoriously unsatisfactory, and the pay of establishment believed to be heavily in arrears.

Settlement. 232. A revenue settlement is in progress, the Settlement Officer being Chaudhri Muhammad Din, Extra Assistant Commissioner, whose services have been lent by the British Government to the Durbar.

Public health and census. 233. Plague occasioned 563 deaths, but the health of the people was otherwise good. The population has, however, declined by 8 per cent. since the last census.

FARIDKOT.

Area, 642 square miles; population, 130,295; gross revenue, Rs. 11½ lakhs; army and police, 763; Chief, Brij Indar Singh, Barar Jat, aged 15½; has no male heir; title, Raja; salute, 11 guns. The State is divided into the two tahsils of Faridkot and Kot Kapúra.

Administration. 234. The young Raja is at the Aitchison Chiefs' College, where his progress has been good. The Council of Regency continued to administer the State satisfactorily. The success of the Council is in large measure due to the energy and enterprise of Sardar Dyal Singh, Mán, the President.

Finance. 235. The expenditure of the year was high, Rs. 8,71,000, owing to expenses incurred on the Durbar, but fell short of income by nearly Rs. 3 lakhs. The revenue settlement of the State was completed during the year.

Public health and census. 236. The health of the people was good though plague was prevalent. The population has increased by over 4 per cent. in the last decade.

III.—States of the Delhi Division.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; gross revenue, Rs. 6 lakhs; army and police, 628; Chief, Amar Prakash, Rajput, aged 23; has no male heir; title, Raja; salute, 11 guns. The State is divided into the four tahsils of Náhan, Pachhad, Ranika and Paonga.

Administration. 237. His Highness the Raja Surindar Bikram Prakash, K.C.S.I., died at Mussoorie on July 4th, 1911, after a short illness. Tikka Amar Singh was installed as Chief of the State under the title of Raja Amar Parkash on October 26th, 1911, by His Honour the Lieutenant-Governor. The privilege of passing sentences of death on his subjects without confirmation, which was specially granted to the deceased Chief in 1906, was not continued and such sentences will be subject to confirmation by the Commissioner of Delhi.

Public Works. 238. Náhan town is being provided with water works and the services of an Executive Engineer have been lent to the State by the Punjab Government for inspection of the works.

239. Since 1901 the population of the State has risen by 2 per cent. **Census.**

MINOR STATES.

State.	Area in square miles.	Population.	Gross revenue.	Chief.	Race.	Age.	Whether male heir or not.	Army and police.
			Rs.					
Kalsia ...	168	55,915	2,21,000	Ravi Sher Singh ...	Sandhu Jat	9½	No.	196
Pataudi ...	53	15,943	1,11,000	Muhammad Muzaffar Ali Khan.	Afghan ...	52	Yes.	64
Loháru ...	222	18,559	81,500	Amir-ud-din Ahmad Khan, K.C.I.E.	Mughal ...	52	Do.	60
Dujána ...	100	25,485	77,000	Muhammad Khurshed Ali Khan.	Pathan ...	29	Do.	146

The Nawab of Loháru has a personal salute of 9 guns. The Nawab of Dujána is under obligation to provide 50 horsemen on requirement.

240. *Kalsia.*—It is proposed to send the Sardar to the Aitchison College in October 1912. **Kalsia.**

Pataudi.—Powers were restored to the Nawab under certain restrictions in May 1911. The Manager was dispensed with, but a retired Tahsildar, Mirza Muhammad Hussain Khan, was appointed adviser. The Nawabzada was given 1st class powers, Civil, Criminal and Revenue, at the same time and seems to be doing well. **Pataudi.**

Dujana.—Differences have arisen between the Nawab and his sister and younger brother, but a reconciliation is in prospect. **Dujana.**

241. At the census Loháru returned an increase of 22 per cent. and Dujána of 5·4 per cent. Decreases of 10·9 and 16·8 were returned by Pataudi and Kalsia. The variations depend on whether the State has suffered or no from plague. Even now the population of Loháru is no more than 84 to the square mile. **Census.**

IV.—State of the Lahore Division.

CHAMBA.

Area, 3,216 square miles; population, 135,989; gross revenue, Rs. 4 lakhs; army and police, 419; Chief, Sir Bhure Singh, K.C.S.I.; aged 43; Rajput; has a male heir; title, Raja; salute, 11 guns; tribute, Rs. 3,800. The state is divided into the five Wazarats of Brahmaur, Chamba, Bhattiyat, Chaurah and Pangi.

242. The Raja attended the Coronation Durbar at Delhi. His eldest son Tikka Ram Singh was married on January 20th, 1911. Mian Nihal Singh, His Highness' nephew, was accepted by the Punjab Government as a probationary Extra Assistant Commissioner and went for training to the Kángra settlement. **General.**

243. Captain Gillespie, R. E., Chief Engineer of the State, who was in charge of the Hydro-Electric Scheme, proceeded on leave in August and will not return to the State. Mr. Trevor, Forest Officer in Chamba, who has been attached to the State for some years, was succeeded by Mr. R. McIntosh. **Public Works and Forests.**

244. The Chalama spur, 68½ acres of land near Bakloh, was acquired by the British Government from the State on February 16th, 1912, to provide further accommodation for the Gurkha troops. The annual tribute paid by the Raja will be reduced by Rs. 740 in consideration of this acquisition. **Territorial change.**

245. The population of this State has risen by over 6 per cent. since last census. **Census.**

V.—*The Simla Hill States.*

The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including feudatories.	Population in 1911.	Revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.
				Rs.	Rs.						
1	Bashahr	3,831	93,203	95,000	3,945	Shamsher Singh ...	Rajput ...	74	Raja ...	No	13
2	Bilâspur	448	93,107	1,90,000	8,000	Bijai Chand, C.S.I. ...	Do. ...	39	Raja ...	No	198
3	Keonthal	359	46,224	1,00,000	...	Bijai Sen ...	Do. ...	35	Raja ...	Yes	36
4	Jubbal	320	24,620	1,50,000	2,520	Bhagat Chand ...	Do. ...	23	Rana ...	No	19
5	Nálagarh	256	49,280	1,30,000	5,000	Jogindar Singh ...	Do. ...	42	Raja ...	No	88
6	Bâghal	124	26,008	70,000	3,600	Bikram Singh ...	Do. ...	19	Raja ...	Yes	25
7	Bhajji	96	14,972	25,000	1,440	Durga Singh ...	Do. ...	69	Rana ...	Yes	32
8	Kumhársain	90	12,219	24,000	2,000	Hira Singh ...	Do. ...	70	Rana ...	Yes	7
9	Kunhiár	80	2,208	5,000	180	Hardeo Singh ...	Do. ...	14	Thakur ...	No	9
10	Taroch	67	4,493	59,000	288	Surat Singh ...	Do. ...	25	Thakur ...	Yes	...
11	Balsan	51	6,225	15,000	1,080	Bir Singh ...	Do. ...	48	Rana ...	No	...
12	Mailog	43	8,668	20,000	1,440	Durga Chand ...	Do. ...	14	Thakur ...	No	16
13	Baghát	36	8,797	40,000	Over 132	Durga Singh ...	Do. ...	10	Rana ...	No	43
14	Dhami	26	4,484	10,000	720	Hira Singh ...	Do. ...	35	Rana ...	Yes	25
15	Kuthár	20	4,016	16,000	1,000	Jagjit Singh ...	Do. ...	25	Rana ...	Yes	8
16	Sángri	16	3,022	2,000	...	Hira Singh ...	Do. ...	61	Rai ...	Yes	...
17	Mangal	12	1,267	900	72	Tilok Singh ...	Do. ...	61	Rana ...	Yes	...
18	Dárkuti	8	521	1,500	...	Ram Saran Singh ...	Do. ...	59	Rana ...	Yes	...
19	Bija	4	1,064	6,000	124	Puran Chand ...	Do. ...	16	Thakur ...	No	8

Three of the above States have feudatories themselves, the chief particulars of which are as follows; the figures for population and area are included in the previous statement:—

No.	State.	No.	Feudatory.	Area.	Population in 1911.	Revenue.	Name of Chief,	Race.	Age.	Whether male, heir or not.	Military force including police.
						Rs.					
1	Bashahr ...	1	Kaneti ...	100	2,854	4,000	Amog Chand ...	Rajput.	21	...	...
		2	Delath ...	43	1,393	550	Narindar Singh.		62	Yes	...
2	Keonthal ...	1	Koti ...	50	8,265	25,000	Raghbir Chand		52	Yes	56
		2	Theog ...	144	6,345	5,000	Padam Chand ...		26	Yes	8
		3	Madhan ...	9	3,901	2,000	Randhir Singh...		25	No	6
		4	Ghund ...	28	1,887	2,000	Ranjit Singh ...		29	No	...
		5	Ratesh ...	12	472	625	Hira Singh ...		44	Yes	...
3	Jubbal ...	1	Rawin ...	7	749	3,000	Kidar Singh ...		35	Yes	...
		2	Dhadi ...	25	244	1,400	Dharm Singh ...		24	Yes	...

The Raja of Biláspur has a salute of 11 guns.

346. The following occurrences in 1911-12 are noted :— **Chief incidents.**

Bashahr.—Mr. Emerson, I.C.S., was appointed Manager of the State; Rai Sahib Mangat Ram remaining on as Assistant Manager. The administration is proceeding smoothly and there are no traces of the late disaffection.

Biláspur.—Raja Bijai Chand was invested with the title of C.S.I. at the Durbar.

Jubbal.—The Rana was invited to the Durbar. Mian Sher Singh has been retained as Wazir for three more years.

Nalagarh.—On the death of Raja Isari Singh his brother Kanwar Jogindar Singh succeeded to the Gaddi. A Council of three, presided over by Diwan Indar Singh, which is to be retained for three years, conducts the administration.

Kunihár.—Mian Jog Raj was appointed Manager on the death of Pandit Lakshmi Dhar.

Baghát.—Rana Dalip Singh, C.I.E., attended the Durbar and died shortly after his return. His son Durga Singh has been recognised as his successor, but during the new Chief's minority Kunwar Amar Singh, his uncle, will carry on the administration.

Kaneti.—Tikka Amog Chand was invested with full powers.

Madhan.—The settlement was concluded.

247 Collectively the population of the Hill States has increased since the last census; the increase being as much as 12½ per cent. in Bhajji and 10 per cent. in Bashahr. The only important exceptions are Nálagarh, Baghát, Mailog and Balsán. **Census.**

Frontier Affairs.

248. The peace of the border remained undisturbed during the year. The tribes suffered from scarcity, and taccavi loans amounting to Rs. 34,000 were advanced to them through their Chiefs. The conduct of the Tumans was good and their management by the Tumandars generally satisfactory. The Jirga system continued to work well. There was a rise in the number of criminal cases reported as compared with the two preceding years, but the number was not in excess of that reported in 1908-09 except in respect of minor cases in which there is an increasing tendency to take legal proceedings. **General.**

General.

9: Condition of the people.

249. During the year, although conditions approaching famine were not experienced, the unfavourable nature of the monsoon rainfall gave cause for anxiety, especially in the insecure tracts in the south-east of the province. Owing to the general extension of canal irrigation and railway facilities and to the constant excess of the demand for labour over the supply there is at present little fear that human beings need suffer for want of food. Happily the winter harvest was excellent, no less on unirrigated than on irrigated land. The unaccustomed ease with which labour was obtained for the great works on the canals of the Triple Project, however, showed that local conditions were unfavourable in many parts of the province. The fodder famine, which results from a failure of the monsoon harvest, is the most serious difficulty which the administration has to face on these occasions and the past year was no exception to the rule. Apart from the weakening of the recuperative power of the agriculturist which follows from the loss of his cattle, the importance of a fodder famine in the Punjab is that it is most severe in those breeding grounds upon which the province now largely depends for the supply of its agricultural cattle. The provision of free canal water to village tanks and the reduction of freight charges on consignments of fodder to distressed areas do much to minimise the effects of the failure of the rains, and the loss of cattle during the past year was probably small. The continued freedom of the province from malaria and consequent improvement in the general health and stamina of the people have resulted in a further increase in the birth-rate, and at present at any rate the productivity of the present population of the province is high. The reduction in the mortality from plague has arrested the decline in population which the census figures show to have taken place in the last decade and, if the theory that the rats themselves are now becoming naturally inoculated is in accordance with facts, the province has less to fear in the future from this terrible scourge. Prices remain at a high level and show little sign of weakening. To those whose incomes are fixed high prices are anything but a blessing, but they form a small, though important and audible class. All who have had anything to sell, whether it be only the labour of their hands, have shared to the full in the general rise in prices and in particular the labourer, both rural and urban, under the operation of the laws of supply and demand, is freeing himself from the shackles of a customary wage and participating in the increased material wealth of the province. The rise in wages is probably permanent and it is doubtful whether the scale adopted for famine relief works will not now have to be altered in view of the changed conditions.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the revenue.— } Report on the Land Revenue Administration of the Punjab for the agricultural year 1st October 1910 to 30th September 1911.

Revenue Surveys and Settlements.— }

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1911.

Land Records.—Report on the Operations of the Department of Land Records, Punjab, for the year ending 30th September 1911.

Waste Lands and Government Estates.— 1. Annual Report for the Chenab, Jhelum and Chunián Colonies for the year ending 30th September 1911.
2. Land Revenue Report, *as above.*

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1911.

Revenue and rent-paying classes.—Land Revenue Report, *as above.*

PUBLICATION OF THE GOVERNMENT OF INDIA.

Agricultural statistics of India, Volume I—

Area Totals—Table 1 H.	Varieties of Tenure—Table 6 I.
Classification of Area—Table 2 H.	Transfers of Land—Table 7 G.
Incidence of Land Revenue—Table 5-F.	Changes in Boundaries—Table 14.

10.—Realization of the revenue.

FIXED LAND REVENUE.

Demand and collections.

250. The fixed land revenue roll of the province stands at Rs. 2,13,26,353, which is an increase of Rs. 4,59,360 on the figures of the previous year. Re-assessments in Karnál, Delhi, Hissar and Gurdáspur account for increases aggregating 5½ lakhs, while the introduction of fluctuating assessments in the Bhera-Chenab circle of Shahpur and diluvion cause reductions of over a lakh. The other additions and deductions are normal. Of the current demand 99·3 per cent. was recovered. The outstanding balance of the current demand is Rs. 1,53,703, of which Rs. 50,681 are under suspension, Rs. 1,516 undetermined, and Rs. 8,172 recoverable arrears not under suspension. The irrecoverable balance is Rs. 93,334 on account of lands where diluvion has occurred, wells have fallen out of use, or fluctuating assessments have been introduced.

Land revenue temporarily off the fixed land revenue roll amounted to Rs. 90,000, from which the item of Rs. 50,000 due to new assessments in Hissar has to be deducted, leaving the account at the normal figure of Rs. 40,000.

The balance at the close of last year was Rs. 17,42,464, of which Rs. 8,70,908 were classed as recoverable and Rs. 8,71,556 as undetermined or irrecoverable. Of these sums in the year under report, Rs. 8,52,108 have been struck off and Rs. 4,72,157 have been recovered. Rupees 4,25,727 remain as balance. The difference in the totals of Rs. 7,528 is due to a mistake. The year 1911-12 thus starts with balances of years previous to 1910-11 of Rs. 4,25,727 and balances of the year 1910-11 of Rs. 1,53,703. The balance is only a little in excess of 2 per cent. of the revenue roll for the year 1910-11, and would have been smaller still had the outturn of the rabi crop of 1911 been at all up to expectation Of the total Rs. 3,76,968 are under suspension including a sum of Rs. 1,12,152 which has been under suspension for more than three years. The largest items are in the Delhi, Gurgaon and Rohtak districts.

River action.

251. Alluvion and diluvion occurred in 22 districts, resulting in a net decrease of Rs. 23,026 in the fixed land revenue roll. The loss due to Chos and minor streams is a little more than one-seventh of the whole sum involved, the remainder being due to the action of the great rivers. Gurgaon is the only

district which reports a gain; the largest loss is reported in Gurdáspur owing to the action of the Beas and Ravi. But the statistics do not show the total gain and loss of revenue due to alluvion and diluvion, because in the districts in the west of the province where changes are greatest they are dealt with by means of systems of fluctuating assessments

Fluctuating Land Revenue.

Demand and collections.

252. The total demand for permanent fluctuating land revenue is Rs. 71 lakhs, or 17 lakhs better than last year. In the land revenue on canal-irrigated land assessed by the Deputy Commissioner there is a decrease of 1½ lakhs, chiefly due to a bad season in Multán, but in the case of land revenue and malikana assessed by the Irrigation Department there has been an increase of 1 lakh in Gujránwála, 14½ lakhs in Lyallpur, and 2½ lakhs in Jhang. This is due to the new assessments in the Chenab colony introduced in rabi 1911. Less than Rs. 10,000 remained uncollected.

Supervision of demands.

253. It is important under a system of fluctuating demand to see that the demand sanctioned at settlement is actually being obtained, and, to make this possible, at the close of each rabi harvest the Financial Commissioner receives a statement from districts under fluctuating assessments showing the demand of the past year and the average of the demand yearly since settlement as compared with the demand anticipated by the Settlement Officer. The submission of the statement has only been recently prescribed, and it is too early to give a general review of the working of fluctuating assessments on the imperfect returns of two years only; but the Financial Commissioner hopes to be in a position to give the results of his examination of the general working of fluctuating assessments in next year's report.

Other demands classed as Land Revenue.

Demand and collections.

254. The demand on account of other items classified as land revenue amounted to Rs. 24,83,969, of which Rs. 24,45,702 were collected. Rupees 14 lakhs odd were realised from the sale of Government estates in the Chenab Colony and also in Muzaffargarh and Delhi; Rs. 1½ lakhs from nazrana, Rs. 3¼ lakhs from the sale of sites in the town of Tandliánwála in Lyallpur district; Rs. 1 lakh from assignees as their contribution towards the cost of settlement, and Rs. 50,000 from single harvest leases.

Miscellaneous.

Processes for the collection of land revenue.

255. Coercive processes for the collection of land revenue issued against lambardars in 4,683 cases, representing an increase of 846 cases on last year, but of these processes 2,481 were only "writs." Coercive processes against others, including 7,197 writs, issued in 9,589 cases or 352 more than last year. From the lambardars concerned 97 per cent. of the demand was recovered and from the others 90 per cent. Stringent methods to secure payment from lambardars were necessitated in Ferozepore, Gujránwála, Muzaffargarh and Dera Gházi Khan, while the lambardars appear to have most required assistance from the Act in the districts of Rohtak, Amritsar and Gurdáspur. The processes issued were mainly served by the agency of the tahsil establishment, special extra establishment being employed in 17 districts only. Receipts from process fees amounted to Rs. 18,485,—a large increase, due to the scale of fees having recently been raised.

Payment of revenue through the Post Office.

256. In Karnál nearly Rs. 2½ lakhs of Government demands were remitted to the treasury by money order, and over a lakh of rupees was remitted in each case in the districts of Gurgaon, Jhang and Gujránwála. Fourteen districts used this method extensively, while in twelve other districts there was a limited resort to this manner of remitting money to meet Government demands The total sums of land revenue, malikana, occupier's rate and cesses sent by money order amounted to 14 lakhs of rupees. The expenses connected with the custody and remittance of treasure from rural post offices are already a serious item.

The system of remittance by currency notes is to be continued experimentally till May 1912 in the Khangah Dográn tahsil of Gujránwála, where Rs. 59,120 were remitted by this method during the present year.

11.—Professional Surveys.

257. No. 2 party surveyed an area of 1,026 square miles in the Salt Range at the request of the Punjab Government on the 2-inch scale, and a further area of 4,971 square miles on the 1-inch scale in the Attock, Jhelum, Shahpur, Gujránwála, Gujrát and Siálkot districts, and in Jammu. These surveys include a forest area of 219 square miles, including reserved and unclassified forests and rakhs. **Work carried out.**

No. 3 party carried out a 2-inch revision survey for 65 square miles comprising the city of Delhi and its environs, and a special guide map of this area has been drawn out on that scale. The party also surveyed parts of the Delhi and Gurgáon districts on the 1-inch scale.

No. 9 party surveyed an area of 5,687 square miles, including 326 square miles of forest, on the 1-inch scale in the Jhang, Miánwáli, Shahpur, Lyallpur, Gujránwála, Lahore and Montgomery districts. In this party considerable use was made of the patwaris' maps which were pantographed down and the reductions transferred to the plane table sections. Twenty-one 1-inch standard sheets relating to the Punjab were issued.

258. The Punjab riverain detachment continued the work of traversing and laying down base lines for the future demarcation and survey of riverain boundaries and for the general co-ordination of the cadastral surveys of the riverain estates. Traversing was carried out for cadastral surveys on the Sutlej, Beas, Jhelum and Chenab and for riverain boundaries on the Jumna and Indus. Settlement mapping sheets were completed for 259 villages showing the village boundaries, and 21 four-inch sheets were traced and supplied to the Settlement Officers of Gujránwála, Ferozepore and Hoshiárpur. Work was also started in February on the Lower Bari Doab 25-acre rectangular survey, closed in June and restarted in September with an increased staff. In all 4,164 rectangles were broken. The operations will extend over an area of some 2,500 square miles, which will eventually be commanded by the Lower Bari Doab Canal. The staff employed on this work is largely provided by the Settlement Department. The total cost of the riverain work, which is a charge on provincial funds, was Rs. 26,328 and of the rectangular survey Rs. 47,041. The latter sum will eventually be recovered from the irrigators when irrigation is begun. **Riverain detachment.**

12.—Revenue Surveys and Settlements.

259. *Kulu.*—Good progress was made by the Sub-Divisional Officer in the settlement of his charge. Orders were passed on the assessment report, and it is expected that the work will be finished early in 1913. No new assessments have yet been announced. **Settlements.**

Dera-Hamirpur-Una.—Progress has not been made to the extent anticipated owing to the difficulty of obtaining a competent staff for the measurement work in the hills where service is unpopular: but work has now begun in earnest. The settlement, which is an intricate and important one, will take longer and cost more than was anticipated.

Hoshiárpur.—Excellent progress is shown in the returns for the three tahsils of this settlement which will probably be completed in the time and at the cost estimated in the forecast. No assessment report had been submitted at the close of the year.

Ludhiána.—The settlement has been completed in a little over 3 as compared with the estimate of $3\frac{1}{2}$ years, and has cost Rs. $1\frac{1}{4}$ lakhs less than the forecast of Rs. $5\frac{1}{4}$ lakhs. The increase in land revenue obtained, Rs. 4 lakhs, is Rs. $1\frac{1}{2}$ lakhs better than the estimate.

Ferozepore.—Satisfactory progress has been made in map correction and record work: except in riverain villages remeasurement will be unnecessary. The excellence of the previous maps has greatly facilitated work.

Wazirabád-Gujránwála-Sharakpur.—Much special work has been undertaken in this settlement, which will probably now take a year longer than anticipated. In connection with the introduction of canal irrigation, 25-acre rectangles have been demarcated in the Government waste to facilitate

allotment, and in privately owned areas killabandi, the re-arrangement of holding in *killas* (acre rectangles) has occupied much time. Two of the three assessment reports have been submitted, on one of which orders were passed by Government.

Gurdáspur.—Map and record work was completed during the year. Assessments were announced in Batála and Gurdáspur, and orders were issued for Shakargarh. The duration and result (an increase of Rs. 3 lakhs) of the settlement are working out exactly as was forecasted, while the cost of the operations will be Rs. 2 lakhs less.

Amritsar.—As in Ferozepore the excellence of the old maps has reduced the labour of map correction which with the record work is well advanced.

Hissar.—Orders on the last assessment report were issued early in the year, and this difficult settlement was wound up by the end of May 1911. The cost of the proceedings which lasted 4½ years amounted to Rs. 5,31,000. The increase taken amounts to over Rs. 2¼ lakhs, but over half-a-lakh of this has been deferred for various periods.

In addition to the above regular settlements reassessment work was in progress in the Lower Chenab Colony, and in the colony and proprietary areas of the Lower Jhelum Canal in Shahpur district.

On the Lower Chenab Canal the orders of the Government were passed on the assessment reports of four of the colony circles and the new demand was announced before April 1911. The increase from these re-assessments is estimated at about Rs. 17 lakhs.

In Shahpur district the assessment report was received late in the year, and was under the consideration of Government at its close.

The demarcation of 25-acre rectangles on the Upper Chenab Canal area was practically completed and a similar undertaking in the area to be irrigated by the Upper Jhelum Canal was commenced at the instance of the Irrigation Department. Both surveys are in charge of the Settlement Officer, Gujránwála.

Preparations for future operations.

260. Preparations were made for settlements in the portion of the Shahpur district not irrigated by the Lower Jhelum Canal and in Siálkot, Gujrát, Lahore and Jullundur districts. In Gujrát and Lahore the experiment of revising maps and records prior to settlement proceedings is being tried, and in Gujrát good progress was made.

It has been decided that the Local Government shall in future have the power to sanction the undertaking of new settlements, a measure of devolution which will render possible a greater regularity in the number of settlements undertaken and in the establishment employed.

13.—Land Records.

Patwaris.

261. There are now employed in the province 8,343 patwaris and 455 assistants, it having been found possible to bring 27 patwaris under reduction in Lyallpur. On the average for the province each patwari has to deal with an area of 6,800 acres (of which 3,400 acres are cultivated): 4,700 fields assessed at Rs. 3,300 and included in 1,331 ownership holdings. The average pay of the patwari (assistants are paid less) is Rs. 12 per mensem exclusive of mutation fees and copying and inspection fees. The new scale of mutation fees introduced in December 1909 has materially benefited the patwari, who obtains on the average Rs. 17 per annum from this source. Some difficulty in obtaining really suitable patwari candidates is reported.

Patwarkhanas.

262. The cost of the patwari establishment was Rs. 12,74,959—a further slight decrease on previous figures. The vexed subject of the provision and maintenance of official residences for patwaris has again been before Government, but except that Government has in some degree accepted the principle that patwarkhanas must be provided at the expense of the State in newly colonised areas no definite pronouncement of policy has been possible. A recommendation of the Finance Committee of the Provincial Legislative Council that the onus of providing and keeping patwarkhanas in repair should be laid upon village communities is under consideration.

263. The number of field kanungos (exclusive of those employed on special settlement staffs) is 419 or one to every 20 patwaris. Candidates are readily forthcoming. A scheme is being worked out for the amalgamation of the district and settlement kanungo establishments with a view to the equalisation of promotion and the training of a requisite number of men. As things are, the kanungo staff in districts not recently under settlement is reported as very mediocre. Kanungos.

264. The instructions, issued with the object of securing greater accuracy in the annual records in order that in time the necessity for general periodical revision may be obviated, have been carried out in the newly settled districts of the province. The instructions themselves are sufficient for the purpose; but to attain the ultimate object it is essential that vigilance should never be relaxed. For this reason it is advisable, where possible, to place an Assistant Commissioner or Extra Assistant Commissioner in charge of the revenue record work of each tahsil. Records.

The number of mutations attested, 758,096, was less than usual, owing, it is said, to work in connection with the census. The new scale of mutation fees has caused a slight increase in the Government share and a large increase in the patwaris' share of the income. The scale is not as yet well understood. The experiment of employing selected kanungos to attest undisputed mutations of inheritance continues. It has not given appreciable relief to Tahsildars and Naib Tahsildars, but has certainly led to the prompt disposal of this class of case.

265. As a result of the abolition of the office of Settlement Commissioner, the Director of Land Records has now been associated with the record and mapping work in settlements. His duties in regard to this work have been defined by new instructions issued. Changes in supervision.

14.—Waste lands and Government estates.

266. The area of unclassed forests and other Government lands under the control of the Deputy Commissioners is returned at approximately $7\frac{1}{2}$ million acres, from which an income estimated at Rs. $41\frac{3}{4}$ lakhs is derived. The area is exclusive of State-owned forests in charge of the Forest Department, much of the plains portion of which is culturable. Two thirds of the $7\frac{1}{2}$ million acres are included in the six districts of the Multán division, and indeed, with the exception of the Miánwáli, Shahpur, Gujránwála and Lahore districts, the area of State-owned land elsewhere is trifling. Over $1\frac{1}{4}$ million acres are leased for cultivation under the waste land lease rules, but practically the whole of this, over a million acres, is leased on single harvest leases in Montgomery district alone. Over 2 million acres in addition are leased under the Government Tenants Act principally in the Chenab Colony (Lyallpur, Gujránwála and Jhang 1,700,000 acres), in the Jhelum Colony (Shahpur 300,000 acres), the Chunian Colony (Lahore 78,000 acres) and the Sidhnai Colony (Multan 58,000 acres). These areas are gradually contracting as the original lessees purchase their allotments, a process accelerated by the recent decision to allow the privilege of purchase to peasant colonists who were originally granted an inalienable right of occupancy only. Area classification.

The rakhs in the south of the Dera Gházi Khan district, which have been handed over to the Deputy Commissioner for management, were formerly worked at a loss by the Forest Department owing to their great distance from a timber market, the absence of any local demand for wood and the inaccessibility of the rakhs themselves for purposes of inspection and management; but the opening of the railway to Chachran has altered the situation and increased the value of the wood crop. A departure from the policy of abandoning these rakhs to cultivation, and a return of the system of forest management are under consideration.

267. In the Multán district the village contract assessment of tirni expired in October 1910. Fresh assessments were sanctioned by the Financial Commissioner amounting to Rs. 19,333—an increase of Rs. 2,528 over the previous quinquennial assessment. The camel tirni was fixed at Rs. 15,000—a decrease of Rs. 2,399 from the previous figures due to a large decrease in the Grazing leases.

number of camels. The auction of leases on the chak system for two years also took place and resulted in a total increase of Rs. 730 over the last biennial bids.

Colonization.

268. Separate reports are received by Government for the operations in the Chenab, Jhelum and Chunian Colonies, though the special colonization staff has been withdrawn and the administration is being assimilated as far as possible under the Deputy Commissioner to that of the province generally. The reports deal only with the areas of what was originally Government land on each canal, which have been colonized, and not with the proprietary areas also irrigated by these canals.

Lower Chenab Colony.

269. The allotted area in the Lower Chenab Colony has now reached 1,842,561 acres, of which 103 per cent. was sown during the year, remissions for failure being needed on 5 per cent. of this area only. The area largely exceeds the maximum area of design for the canal. Of the grants on service conditions, the question of the allotments to the Grantee Camel Corps is under reference to the Government of India. The grants to village headman on mule-breeding conditions are generally fulfilled and the lucrative nature of mule-breeding from the zamindar's point of view is beyond all doubt; the conditions give good results to Government. The future of the plantation grants is under consideration.

The re-assessment of the circles into which the Colony is divided is being carried out as the original terms of engagement expire. The new assessments of the three Jhang Branch Circles, and one of the Gugera Branch circles were introduced during the year. The previous system of fluctuating assessments is being retained, but instead of separate demands for "owner's rate" and land revenue a single land revenue demand is being taken. The demand on account of "occupier's rate," which is the charge taken by the canal department for the water supply, remains generally unchanged.

As it is now established beyond all doubt that the vast majority of colony villages receive a stable supply of irrigation more than sufficient for their prosperity, the abolition of the system of holding-to-holding remissions for failed crops was put into operation from kharif 1911 in the circles which had been reassessed. The villages where water-supply is still deficient continue to receive holding-to-holding kharaba; and those in which the soil is markedly inferior are to be given a lower schedule of occupier's rates. This departure coupled with the rise in the revenue rates will have the effect of encouraging more thoroughness in cultivation and more care in the use of water. It will be interesting to observe whether it will also result in any contraction in the rabi area which has always been largely inflated on the Lower Chenab Canal by wide speculative sowings which under the old system paid no demand if they failed owing to deficient winter rains.

The progress of the acquisition of proprietary rights by nazarana-paying grantees is satisfactory. Only 80 out of 1,150 grantees have not yet availed themselves of the privilege of acquiring proprietary rights at the very favourable rates represented by the sanctioned nazarana schedule. All indications point to the conclusion that the peasant colonist will not be slow to avail himself of the option now bestowed on him of purchasing proprietary rights at the low rate of Rs. 12-8-0 per acre. In Lyallpur Rs. 1,68,490 were paid in before the close of the financial year 1910-11, and a similar rush of payments amounting to Rs. 19,90,752 occurred in September and early October.

The prices obtained at the sale of land for the extensions of Lyallpur and Sangla towns hardly confirm the view alluded to last year that there has been an over multiplication of Colony towns. The future finance of the towns is a subject for anxiety. Octroi is an unsuitable tax for these export towns, and the fact that the house sites are assessed to land-revenue introduces some difficulty in adopting any high scale of house-tax. Most of the local needs of these towns should, however, be met by local taxation, and their individual prosperity is a matter of such certainty that the difficulty of meeting local needs does not lie in the impossibility of raising enough money by local taxation but in devising a form of taxation which will fairly tax the prosperity of all classes enjoying the not inconsiderable local amenities of these towns.

The opening of the Chichoki Mallian-Shorkot Road railway for through traffic to Karachi is an important event in the development of the portion of the Lower Chenab Colony watered by the Gugera Branch. The circumstance that over Rs. 22 lakhs were remitted by money-order from the Lyallpur part of the colony alone to other districts is most significant, and leads us to a realization of the fact that it is not the position of the fortunate colonist alone which has been improved out of all measure by this great colonization scheme, but that it has had a marked effect on the prosperity and stability of the agricultural population at large in the province.

Lower Jhelum Colony.

270. The total allotted area in the Lower Jhelum Colony is 394,044 acres, of which 90 per cent. was sown during the year, remission on the sown area amounting to 8 per cent.

An important change in the horse-breeding conditions, of the nature of a modification of the strictness of the primogeniture rule, has been made in the direction of the inclusion of the sonless widow as an heir, where the present holder of a grant desires this condition. The primogeniture rules of succession which have hitherto been in force in this colony for the larger non-horse-breeding grants as well as for all horse-breeding grants will be abolished for the former by the new Colony Bill, when passed. The enforcement of succession by primogeniture for the peasant horse-breeding grants is becoming increasingly difficult, as families make the colony more and more their permanent home, and its evasion by private agreement is now the rule rather than the exception. The unpopularity of these conditions with younger sons, and no doubt with parents too, was from the first an inevitable incident of the tenure, but so long as the horse-breeding experiment is under these conditions successful and so long as these conditions are essential to its success it is important that nothing should be done to disturb the arrangement.

Records-of-rights have been completed for the whole colony, and the assessment report for the whole area watered by the Lower Jhelum Canal in Shahpur district has been submitted. The problem of assessment here offers more complications than on the Lower Chenab Canal owing to the large number of proprietary villages in each circle and the differences in holdings, tenancies and rents between these and the colony villages, the instability of irrigation in some of the newer parts of the colony and the large proportion of inferior land in the southern Assessment Circles.

In spite of the ravages of plague the population of the Colony shows a satisfactory increase. The towns in the Colony have been much hampered in their development by plague; but have advanced considerably and are now falling into line with other towns and being administered as notified areas. The growth of the co-operative movement and its outlet in a co-operative agriculturists' cotton factory is brought to notice.

Chunian Colony.

271. In the Chunian Colony the allotted area has now reached 80,171 acres: 103 per cent. of this area was sown, and remission for failed corps, which in this colony only affect the water rate collections (the land revenue being a fixed demand), amounted to 5 per cent. only. Occupancy rights have been awarded in most of the villages, but proprietary right cannot be purchased until the expiry of 15 years from allotment, a condition which has not yet been fulfilled in any case. The assimilation of this colony to the general administration of the district is more marked than is the case in the larger colonies already referred to.

15.—Wards Estates.

Number of Estates.

272. At the end of September 1911 the estates under the Court of Wards numbered 51, with a total income of Rs. 23 lakhs. Five estates have an income exceeding Rs. 1 lakh. The total assets are valued at Rs. 414 lakhs of which Rs. 121½ lakhs represent the capitalised value of land revenue assignments, 191 lakhs the estimated value of the land and Rs. 56½ lakhs the value of house property. The most important estate, that of the Nawab of Mamdot, is being retained under management at the request of the Nawab himself, who is now of age. Twenty-one wards attended the Aitchison College during the year.

Results.

273. The usefulness of the Court in saving from reckless dissipation or improper diversion the property and funds of families of note has been abundantly proved, and successful management is a commonplace of the Court of Wards administration. The difficulty of investing surplus funds is a continual problem as real property, the most advantageous form of investment, is not always available. An audit of the accounts of Court of Wards estates is carried out by the Examiner of Local Fund Accounts with great advantage to the administration.

16.—Revenue and rent-paying classes.

Revenue-paying classes.

General.

274. Omitting village common and Government lands, 3,523,685 persons hold 39,489,388 acres of land in 3,082,348 holdings. Seven acres in each holding on the average are cultivated, and the average assessment per cultivated acre is Re. 1-1-9. One-sixth of the total owned area is owned by persons who are not members of an agricultural tribe and five-sixths by members of the notified tribes. Only 11 per cent. of the cultivated area is under mortgage. The percentage of the total cultivated area mortgaged is heaviest in Siálkot and Gurdáspur, and, omitting Lyallpur, where conditions are abnormal, lightest in Rawalpindi, Montgomery and Hissar.

Transfers (all classes of rights).

275. The area involved in the gifts made in the year under report does not differ materially from that of the previous year. Exchanges are unimportant because the differences in the figures are generally due to regrants of Government land in the Canal colonies or to adjustments made in the course of killabandi operations. The number of mortgages was 97,877 as compared with 112,061 in the previous year. Last year a cultivated acre of mortgaged land represented a value secured of Rs. 95 per acre. In the present year the mortgage money secured per acre is Rs. 101. The area sold is less than last year; but the price obtained per cultivated acre has risen from Rs. 115 to Rs. 124. The multiple of the land revenue which the sale money represents is an important guide to the actual pitch of the land revenue assessments. The multiple is large in all districts except Delhi and Gurgaon, where it is 39 and 42, respectively, indicating that the purchaser expecting a 5 per cent. return on his purchase money estimates the rent to be three times the land revenue even in these two districts. Omitting Lahore and Simla, where sales of urban property influence the results, the figures indicate an extreme lightness of demand in the districts of Hoshiárpur, Jullundar, Ludhiána, Ferozepore, and Amritsar and in all the districts of the Ráwalpindi and Multán divisions.

Sale and mortgage of proprietary right.

276. As regards sales of agricultural land held in proprietary right, an owner now can expect to get Rs. 129 per cultivated acre and on the average the price he receives per acre is 123 times the land revenue assessed thereon, which shows the purchaser's estimate of the net income from land to be seven times the land revenue. The total cultivated área under usufructuary mortgage was somewhat less than last year, and the area released from mortgage exceeded the area newly mortgaged. There is a steady increase in the value of land for the purpose of mortgage.

Land Alienation Act.

277. There is little to record under the Land Alienation Act. The Gaur Brahmins of Hissar, excluding tahsil Sirsa, were included in the Gaur Brahmin group in the Delhi division. The Koreshi Sheikhs of Hoshiárpur were included in the general group of agricultural tribes in the Hoshiárpur district. Bodlas, Mahtams and Kharrals were added to the Gujránwála district group of agricultural tribes owing to the transfer to that district of the Sharakpur tahsil of Lahore. Mazbi Sikhs were notified as an agricultural tribe in a separate group in each of the districts of Lyallpur and Gujránwála. Deputy Commissioners have been directed not to withhold sanction to sale by members of an agricultural tribe in cases where the *bonâ fide* object of the purchase is to obtain a site for a workshop or a factory or a building site close to a town or village, if they are satisfied that the intention is not merely to evade the Act. It is not the intention of the Act to offer any obstacle to legitimate desire for commercial development. Benami transactions and evasions are reported to have come to light in several districts. A case quoted in the Amritsar district

report show how insecure the position of the real mortgagee is in the benami transaction, as in the case in question the puppet put in possession by the real mortgagee colluded with the mortgagor in denying the claims of the mortgagee to the profits from the land.

In mortgages the agricultural tribes lost 25,000 acres; in sales they gained 14,000 acres, and in redemptions they gained 20,000 acres. Thus on paper the agricultural tribes gained some 9,000 acres. In effect these figures are valueless as they obscure the main facts of the situation. Sufficient evidence that the Act is fulfilling its purpose is given by the following comparison. For the three years preceding the passing of the Act the area sold was thrice and the area mortgaged was more than twice what it is now. And yet the area redeemed now in a year falls little short of the area redeemed in 1899, while the mortgages now are ordinarily only for a term.

RENT-PAYING CLASSES.

Cultivating occupancy.

278. In the section of the last chapter describing land tenures will be found a table showing the distribution of the land between owners and the various classes of tenants. The proportion of the cultivated area occupied by self-cultivating owners, which had fallen from 46·3 to 44·4 per cent. during the preceding decade is shown as having risen to 47·3 per cent. The effect on the figures of the inclusion of Government tenants among self-cultivating owners, as there explained, is clear from the Lyallpur figures, where cultivating owners hold 56·2 per cent. of the whole. In Shahpur, which is largely a colony district, the proportion is 50·9 per cent.

Rents.

279. The latest quinquennial return of rents is for the year ending June 15th, 1907. The great majority of occupancy tenants pay cash rents: 79 per cent. of the area so held being cash rented. In 1902 this area was 83 per cent. of the whole. The decrease does not, however, necessarily indicate any growing popularity of kind rents in occupancy holdings. It is probably due to the present classification as owners of self-cultivating Government tenants in the colonies, all of whom of course pay Government cash rents. The matter is explained in paragraph 156.

Tenants-at-will hold 11,658,325 acres, of which 31 per cent. only is cash rented, 69 per cent. being held by tenants paying rents in kind (batai). The figures in 1902 were 36 per cent. and 64 per cent. respectively. Here again it is too much to assume a great increase in the popularity of kind rents, though some such movement has possibly taken place. The form of rent taken is to a large extent a matter of local custom, and it is just in those areas where kind rents preponderate that the greatest increase in cultivation has taken place in the decade. Moreover, the tenants of Government tenants now appear in the statements as the tenants instead of the Government tenants themselves. The former usually pay rents in kind, the latter, as explained, in cash.

Enhancement of rent of occupancy tenants.

280. There is an increase of 54 as compared with last year in the suits instituted for the enhancement of rent. Of the 1,813 cases of this kind instituted during the year, enhancements of rent were granted in 1,416. The districts in which institutions were numerous are Hissar, Hoshiárpur, Jullundur, and Gurdáspur. In Hissar and Gurdáspur the numerous institutions are ascribed to the announcements of new assessments and settlement operations. In Jullundur the cause list under this head is always heavy. In Hoshiárpur the cases have decreased by 469, while in Rohtak and Delhi, where the cases were numerous in 1909-10, the position is now, with the close of settlement operations, normal again. It has been remarked that these cases tend to become numerous at two periods, that immediately preceding the inception of settlement operations and that immediately succeeding the announcement of the new assessments, and the suggestion is made that Revenue Courts should hold over the cases instituted in the earlier period till reassessments have been announced. The best agency, however, for the disposal of such suits is available when settlement operations are actually in progress, and if landlords prefer to institute their suits at that time, it is doubtful whether it would be either right or advantageous to hold them over. Tenants are sufficiently protected by the provisions of section 24 of the Tenancy Act from a double enhancement.

Ejectment of tenants.

281. Proceedings relating to the ejectment of tenants with a right of occupancy continue unimportant in the province.

In regard to tenants-at-will, a noticeable feature is the marked decrease during the last ten years in the use of all the sections of the Punjab Tenancy Act by which a landlord can proceed towards the ejectment of a tenant-at-will, while the suits by tenants to contest liability to ejectment show an increase. The ravages of plague which have decreased the ranks of the tenant and menial class and the great demand and lucrative prospects for tenants in the new colonies have placed the tenant class in a strong position. The consequent delicacy with which the landlords have to treat them in order to retain them, when considered in relation to the rise of cash and other rents which has been brought out in the statistics of so many recent reassessments in this province, support the conclusion that agricultural prosperity has in the last decade made steady progress despite the ravages of plague and the increase in the cost of labour.

Miscellaneous.

Land revenue assignments.

282. Assignments of land revenue amounted to rather over Rs. 29½ lakhs, a slight increase on last year's figures. Of this over 20½ lakhs are assigned for the benefit of private individuals. The percentage of land revenue assigned to the total land revenue of the province is 9·5 as against 9·7 in the preceding year. The assignments in Ludhiána and Gurdáspur were revised during the year in the course of settlement operations in those districts. Assignments to military pensioners were made in Rohtak, Ludhiána, Gujránwála and Ráwalpindi to the total value of Rs. 2,400.

Descent of Jagirs Act.

283. Two jagirs were notified during the year under Punjab Act IV of 1900, both in the Gujránwála district. The declarations of a rule of integral descent were based on written instruments. The approximate value of the jagirs thus notified was Rs. 636-8-0. The total number of jagirs gazetted under the Act is now 130, valued at Rs. 7,80,636-8-0.

Land Acquisition Act.

284. Nearly 7,000 acres were acquired for public purposes during the year, of which some 3,200 acres were for railway extensions, 3,120 for canals, 43 for roads and 635 for buildings and miscellaneous works. It is everywhere the case that the land revenue assessment is no longer a real guide for the valuation of land. The rise in the value of agricultural land is a commonplace of Punjab economics, but the enormous prices paid for urban and suburban sites are a phenomenon of no less importance. Settlement Officers probably do not take sufficient cognizance of such developments when submitting their proposals for assessment circles containing urban areas.

Punjab Land Preservation (Chos) Act.

285. With a view to confining the destructive action of the torrents in Ambála a further grant of Rs. 1,000 was made to the Deputy Commissioner of the district. In spite of the limited period of last year's operations, 5,185 bighas of land were partially reclaimed by planting grass. Operations this year are confined to the Rupar sub-division, and the grant will be spent in further planting and in rewards to those who erect protective works.

Under section 8 (1) of the Act a notification has been issued in the case of seven villages affected by the Dada Cho in Hoshiárpur directing persons possessing proprietary or occupancy rights in the bed of the cho to take measures within three years to reclaim the land. The notification issued in September, and in spite of the difficulties of the limited application of the section itself and the apathy of a number of the persons concerned, it is hoped that the experiment may begin to show results next year.

An area of 3,083 acres was acquired in perpetuity under section 8 (2) of the Act in 31 villages affected by the Mahli Cho. It was decided to spend Rs. 10,000 this year in planting *kharkhana* grass and trees and building ten masonry dams. Professional advice is being obtained. The land, when reclaimed, is to be handed back to the people at the price of reclamation, and accounts have to be kept to enable the eventual expenditure to be distributed over the sections of the bed in each estate. From every point of view accordingly it is desirable not to delay the work and to keep expenditure down as low as is compatible with efficiency.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1911.

(2) Report on the working of the Criminal Tribes Act for the year 1911.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1911.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1911.

Prisons.—Report on the Administration of the Jails in the Punjab, 1911.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1911.

Registration.—Note on the Registration Returns of the Punjab for the year 1911.

Legal affairs of Government.—Report on the administration of the legal affairs of the Government of the Punjab for the year 1911.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1911-12.

Municipal Administration.—Report on the working of municipalities in the Punjab during the year 1911-12.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part VI—Administrative and Judicial,

Part VIII—Local Funds.

17.—LEGISLATING AUTHORITY.

Sources of legislation.

286. There are four legislative bodies from which emanate laws applicable to the Punjab. They are—

I.—The Imperial Parliament.

II.—The Legislative Council of the Governor-General of India.

III.—The Governor-General in Council.

IV.—The Council of the Lieutenant-Governor of the Punjab.

Authority for Frontier Regulations.

287. Under the Statute 33 Vic., Cap. 3 of 1870, the Governor-General in Executive Council may make regulations having the force of law for territories to which the provisions of Section 1 of that Statute have been extended. The tracts in the Punjab, for which regulations have been made in accordance with this Statute, are now the districts of Mianwali and Dera Ghazi Khan, the tahsil of Leiah in Muzaffargarh and the *pargana* of Spiti in the Kulu sub-division of Kangra. The procedure laid down by this Statute assigns the initiative in such legislation to the Lieutenant-Governor, who proposes to the Governor-General in Council the draft of each Regulation with the reasons for proposing the same. When the draft has received the assent of the Governor-General in Council and has been duly published in the Gazettes it has the like force of law as if it had been made by the Legislative Council of the Governor-General. The present Frontier Crimes Regulation (III of 1901), which is in force in the above tracts, Spiti excepted, replaced a similar Regulation of 1887 and embodied all the amendments suggested by 14 years' experience of its administration. The Frontier Murderous Outrages Regulation (IV of 1901) also applies to the same tracts. For Spiti there is a special Regulation, issued in 1873.

Punjab Provincial Council.

288. A local legislature for the Punjab was first created from 1st May 1897 under section 44 of the Statute 24 and 25 Vic., Cap. 67 of 1861, by proclamation in the *Gazette of India*, dated 9th April 1897, up to which date the special legislation for the province had been provided by the Imperial Legislature. Under this proclamation a Council of nine nominated members was created.

The first Council was nominated by a notification of the Punjab Government in the Home Department, No. 1062, dated 12th October 1897; by notification No. 1063 of the same date the first day of November 1897 was fixed as the date of the first meeting; and under notification No. 1064 of the same date rules for the conduct of business at meetings of the Council were published.

Powers of the Punjab Council.

289. The powers of the Punjab Council so constituted were purely legislative and were exercised subject to the control of the Governor-General in Council, to whom all Bills included under the provisions of Section 43 of the Indian Councils Act, 1861, or containing penal clauses, were submitted for previous sanction, and to whom also every project of law was forwarded for transmission to the Secretary of State before it was introduced into Council. Before any measure, carried through the Council, could become law, it required the assent of the Lieutenant-Governor and of the Governor-General in Council. No rules under the Statute 55 and 56 Vic., Cap. 14 of 1892, amending the Indian Councils Act, of 1861, which authorised the discussion in Council of the Annual Financial Statement of the Local Government and the asking of questions on matters of public interest, were made, nor regulations, as in other Provinces, providing for the nomination of non-official Members on the recommendation of public associations, municipal and other bodies.

Legislation.

290. The Legislative Council speedily justified its existence, and after framing a General Clauses Act, which was passed as Act I of 1898, proceeded to add to the Statute book the following important measures:—

The Punjab Riverain Boundaries Act (I of 1899), an addition to the Punjab Land Revenue Act of 1887, by which power was given to substitute fixed village boundaries on the rivers of the province for the previous system by which the boundary depended on the vagaries of the deep stream of the river. Under this Act all riverain boundaries have now become fixed within the province, but so far all efforts to induce the Government of the United Provinces to co-operate in extending the law to the Jumna have failed.

The Punjab Land Preservation (Chos) Act (II of 1900) enabling Government to compel, or take, action to arrest the destructive effects of the hill torrents which pour down from the Siwaliks.

The Punjab Descent of Jagirs Act (IV of 1900) already explained in paragraph 136.

The Punjab Military Transport Animals Act (I of 1903) providing for the enumeration and registration of animals fit for transport purposes and for the compulsory acquisition of such animals in time of war and impressment for hire for purposes of military transport at any time.

The Punjab Court of Wards Act (II of 1903) referred to in paragraph 98.

The Punjab Pre-emption Act (II of 1905) referred to in paragraph 140.

The Punjab Minor Canals Act (III of 1905) framed to meet the case of the smaller canals, to which the Northern India Canal and Drainage Act (VIII of 1873) had been found to be inapplicable.

The Colony Bill, passed in Council on February 28th, 1907, failed to obtain the assent of the Governor-General and did not become law.

During the same period the only important enactment dealing exclusively with the province which was passed by the Imperial Legislature was the Punjab Alienation of Land Act (XIII of 1900) explained in paragraph 138. The amending Act there referred to, however, was passed by the Punjab Council as Punjab Act II of 1907.

Reconstitution.

291. The Council, as originally constituted, was in existence for 12½ years, and came to an end at the close of 1909, when, in common with the other provinces possessing Legislative Councils, important changes were effected in the constitution and procedure of the Local Council, under the provisions of the Indian Councils Act of 1909 (9 Edward VII, Cap. 4). This Act came into force on 15th November 1909 under Government of India, Home Department, notification No. 4212 of that date, and on the same day regulations for the nomination and election of members were notified (Government of India, Legislative Department, notification No. 19, dated 15th November 1909). The Council, as at present constituted, ordinarily consists of 24 members, of whom 5 are elected and 19 nominated. Not more than 10 nominated members may be officials. In addition there may be 2 nominated expert members. These numbers do not include the Lieutenant-Governor, who is *ex-officio* President.

The 5-elected members are elected as follows :—

(1) One by the Punjab University.

(2) Three by municipal and cantonment committees, arranged in the Cis-Sutlej, the Central and Western groups.

(3) One by the Punjab Chamber of Commerce.

Under section 4 of the Act a Vice-President is appointed, and the non-official members have the privilege of electing from among their number a representative to serve on the Imperial Council.

Powers of the new Council.

292. The legislative powers of the new Council are exercised in the manner already described in the case of the old Council. The changes made, however, involve a very considerable enlargement of the Council, the introduction for the first time of a system of election of members, and the creation of a non-official majority. At the same time the rules regulating the procedure of the Council have been so modified as to give it very much wider opportunities of expressing its opinion on administrative matters. Questions may be asked and resolutions moved on matters of public interest ; three non-official members sit on the Finance Committee, and in the discussions on the budget members are enabled to take a real and active part in shaping the financial proposals of the year.

18.—Course of Legislation.

Changes among members.

293. During the year the Hon'ble Sir J. M. Douie, K. C. S. I., resigned his seat on retirement, and the Hon'ble Mr. C. A. Barron, Chief Secretary, was nominated in his place. The Hon'ble Mr. Diack, on return from leave, was nominated in place of Mr. Humphreys who vacated his seat. Mr. Diack was also appointed Vice-President in place of the Hon'ble Sir James Douie. The Hon'ble Mr. Farrant was nominated in place of Mr. W. B. Gordon, and on his retirement and resignation the Hon'ble Mr. Scratchley was nominated.

On the death of the Hon'ble Sardar Partap Singh, Baba Gurbakhsh Singh, Bedi, was nominated, and the Hon'ble Mr. Muhammad Shafi was elected by the non-official members to the vacancy on the Imperial Council, caused by Sardar Partap Singh's death.

Among the official members Lieutenant-Colonel Parsons died while on leave.

Business transacted.

294. Five meetings of the Legislative Council were held, three at Lahore, one at Simla and the other at Delhi in December 1911 after the Coronation Durbar.

Four fresh Bills were introduced in Council, three of which were passed and became law, while the fourth, a Bill to establish village criminal tribunals, was subsequently withdrawn. Of the four Bills remaining over from the previous year, the Municipal Bill and the Bill to amend the Punjab Courts Act were passed; while the Bill to establish village civil tribunals and the Colonies Bill were advanced towards their final stages. The Acts passed which became law during the year were—

III of 1911, The Punjab Municipal Act.

IV of 1911, The Delhi Durbar Police (Amendment) Act.

I of 1912, The Punjab Courts (Amendment) Act altering the law of civil appeal.

II of 1912, The Punjab Land Revenue (Amendment) Act giving the Local Government power to sanction the undertaking of settlement operations.

III of 1912, The Punjab Tenancy (Amendment) Act laying down the procedure to be followed where a revenue matter is raised in a civil court.

Forty-six questions were put and answered, but no resolution was moved during the year.

India Acts.

295. The Acts of the Imperial Legislature, more particularly affecting the province, passed during the year, are—the Criminal Tribes Act (III of 1911), the Indian Factories Act (XII of 1911), the Co-operative Societies Act (II of 1912), the Provident Insurance Societies Act (V of 1912) and the Indian Life Assurance Companies Act (VI of 1912).

19.—Police.

General Police Force.

General.

296. The total number of true cognisable cases dealt with by the police rose from 41,320 to 46,503: in itself a serious addition to the labour of the force; but the disquieting feature of the statistics is that the increase has been mainly under serious offences against the person and property, especially in the districts of Siálkot, Gurdáspur, Gujranwala and Ferozepore. It is pointed out that in the past 10 years reported crime has risen from 26,154 true cases in 1901 to 38,152 in 1911, while the number of cases successfully dealt with has remained practically stationary. An explanation of this serious state of things is sought in the representations that, there has been as yet no improvement in the moral support given to the police by the general public to counteract the restrictions imposed by the eradication of discreditable methods and the insistence on straightforward, humane and honest working; that the courts have set up an almost impossible standard of evidence; and that in fact the limit of the capacity of the present force has been reached, resulting as crime increases in less thorough investigations. Roughly speaking, only 50 per cent. of true cases are brought to trial where offences against the State, public tranquillity, person or property are concerned and a conviction is obtained in one-third of such true cases. In regard to the low percentage (69) of convictions to cases tried, the statistics show the importance of speedy disposal of cases, the percentage rising or falling in districts according to the attention paid to this matter.

Violent crime.

297. The heavy increase in murders from 409 to 476 and attempts at murder from 59 to 80 is a disturbing feature of the year's returns. Jhelum, Rawalpindi and Attock are among the districts from which most cases of murder are reported: the conditions in these districts are not normal, however, as they have been infested with a dangerous gang of well-armed dakaits whose example has had a far-reaching effect on the turbulent inhabitants of this part of the province. Closely connected with the increase in murder is the increase in dakaiti, of which 36 cases were reported in 1909, 48 in 1910 and 100 in 1911; 21 per cent. alone leading to a conviction in the last year. The cases are reported mainly from the Western Range and fall into three groups,—those

committed by gangs of Afghans and others from the frontier, those committed by organised gangs in the north of the province, and finally those by casual gangs in the Central and Eastern Ranges. The frontier gangs have shown great activity and penetrated far into the province, the district of Dera Gházi Khan being particularly at their mercy. These gangs are becoming each year more dangerous and daring, and encourage many imitators. The dakaitis in Rawalpindi, Jhelum and Attock constitute a wave of serious crime such as periodically occurs in all parts of India. Owing to the attitude of the people the work of hunting down the outlaws is one of considerable difficulty. The increase in the closely allied offence of robbery was from 191 to 248 cases.

Burglaries and thefts.

298. Under burglaries an increase of 2,220 true cases is reported with a percentage of conviction of 11 per cent. only, and under thefts an increase of 606 cases with 39½ per cent. convictions: under cattle theft alone the increase in cases was not proportionate to the increase in other classes of crime, and the explanation doubtless lies in the failure of the fodder crop. Boat patrolling in Dera Gházi Khan, Muzaffargarh and Multan has had an excellent deterrent effect on this class of crime.

Over Rs. 21 lakhs worth of property was 'stolen' during the year, of which 30 per cent. was recovered: in burglaries the recoveries were 16 per cent., in theft cases 44 per cent., and in dakaitis 4½ per cent. only.

Investigations on Magistrates' orders.

299. Much of the time of the police is taken up with investigations in cases referred by Magistrates under section 202, Criminal Procedure Code, and the increasing tendency to refer cases is unsatisfactory. The cognisable cases are almost entirely false, and much valuable time is wasted on the investigations.

Securities.

300. The number of persons called upon to furnish security for good behaviour has decreased, and the decrease in the efficacy of the system, now generally admitted, is attributed to the perfunctory nature of the proceedings, the difficulty of getting respectable evidence, the slight deterrent effect of the proceedings, and the failure to confiscate the security on conviction. Security to the amount of Rs. 9,651 only was forfeited during the year, and of this 64 per cent. alone was collected. Securities under sections 106 and 107 to keep the peace were forfeited to the amount of Rs. 4,290, and of this 26 per cent. alone was collected. To make any system of security an effectual preventive of crime, the people must be made to understand that breach of the conditions of the bond will lead to prompt forfeiture and recovery of the amount of the bond.

Surveillance and patrolling.

301. Little success was obtained in the surveillance of prisoners under section 565 of the Criminal Procedure Code, and, as regards bad characters under ordinary police surveillance, it is pointed out that it is futile for the police to expect to restrain such men from crime by merely trying to watch them, which is all that can be done so long as their movements are unrestricted by law.

Since the Police Commission, rural patrolling has practically ceased, to the great handicap of the police. It seems to have been overlooked that no objection was made by the Commisssion to officers being sent out on patrol provided they are sent with a special object.

Railway Police.

302. During the year 166 miles of railway were added to the jurisdiction of the Punjab Railway Police, bringing the mileage up to 4,116 miles. The number of cognisable offences of all kinds reported was 2,394. The working of the Railway Police has been satisfactory, and good results have been obtained in most of the important cases which occurred during the year.

Establishment.

303. The appointment of Circle Inspectors is one of the reforms introduced by the Police Commission, and where the proper stamp of man has been available the system has proved an entire success, but in many cases the Circle Inspectors have not realised the full extent of their responsibilities and duties, and disappointing results have been the consequence. The large proportion of direct appointments of upper subordinates enforced by the Commission still causes discontent in the lower ranks and has resulted temporarily in the force

being handicapped by a large number of inexperienced Sub-Inspectors. Experience has further shown that, on reorganization, the number of head constables was reduced too far, and there are general complaints of the paucity of these officers.

Honours and Rewards.

304. Mr. French, the Inspector-General, received the honour of a K. C. V. O. at the Delhi Durbar, and the order of M. V. O. was bestowed on Messrs. Stewart, Stead and Glascock. The Royal Victorian medal was conferred on nine Inspectors and two European Sergeants, and the title of Raja on one Inspector. Lesser titles also were given in five cases. The King's Police medal was granted to three Deputy Superintendents and three Inspectors. Other rewards were granted to 4,315 officers and men.

A sum of Rs. 13,446 was paid in rewards to the public for assistance in police cases, and a further sum of Rs. 1,652 for the recovery of dead bodies from canals and rivers. In certain cases the rewards were distributed in open durbars, with excellent effect, but more advantage might be taken for this purpose of public fairs and functions.

Finger Print Bureau.

305. The work of the Finger Print Bureau continues to expand: 185,386 finger print slips are now on record. The number of references received was 21,711, of which 19 per cent. were successfully traced, including 3,877 previously convicted persons. Expert evidence was given in 809 cases, and written opinions supplied in 692 cases, of which 583 were civil cases. The fees realised by Government in civil cases amounted to Rs. 5,820.

Chemical Examiner.

Work performed.

306. The work that the Chemical Examiner is called upon to perform continues steadily to increase. In 1911 medico-legal cases investigated (the principal part of the work) amounted to 1,301 with 4,763 articles. The percentage of detection in every class of case is high, and is evidence that discrimination is shown by officers submitting cases for examination. In human poisoning cases arsenic was the most common poison detected, though opium also was frequently discovered. In cattle poisoning cases no other poison but arsenic was found. There is little evidence that the rules framed in 1907 under the Poisons Act to regulate the sale of poisons have done anything whatever to check this form of crime or to facilitate detection.

General analyses were made by the Examiner in 361 cases: the substances submitted for examination consisting chiefly of drugs, water and goods.

It was found necessary during the year to adopt measures to check the increasing tendency to summon the Chemical Examiner and his assistants to give evidence in Court.

Rural Police.

General.

307. Twelve zaildars, 461 lambardars and 358 chokidars were punished for neglect of their police duties, but, on the other hand, 180 zaildars, 406 lambardars and 234 chokidars received rewards for assistance given. Two chokidars in Shahpur met their deaths at the hands of offenders whom they attempted to capture. In most districts village chokidars are inadequately rewarded for assistance given, and have accordingly little incentive to good work. It is, however, fairly generally held that they are useless for the prevention of crime, and give little assistance in cases.

Criminal Tribes.

General.

308. Act XXVII of 1871 was replaced by Act III of 1911 during the year, but it was too late for advantage to be taken of the extended powers given, especially over wandering tribes. The number of males on the register is 20,777, more than half of whom are Sánsís and Báwarias: of the total, 8,205 persons are exempt from roll-call.

There is ample evidence to show that exemptions and passes are being liberally granted, and that the restrictions of the Act are being applied to incorrigibles only. If these latter absent themselves, it can safely be presumed

that in 95 per cent. of cases it is for the purpose of committing crime. The steady decrease year by year in the number of absentees is another proof that discrimination is being exercised, and also that a stricter supervision is kept over non-exempted persons. On the other hand, the Mahtams appear to have taken advantage of the exemptions given. The conduct of the Ludhiana Sánsís has led to a proposal to enlist 30 of them in the District Police.

The district reports go to show that the provisions of the Act are working satisfactorily, and that steady progress is being made. Fewer convictions, fewer absentees, more rewards and no complaints against village officials during a year when there was a general increase in crime, particularly in offences against property, are the facts which tend to show that progress has been made. The outlook generally is brighter than it has been during previous years.

Salvation Army reclamation scheme.

309. The Salvation Army has been quietly but steadily extending its scheme for the reclamation of criminal tribes. It has, with the assistance of the Local Government, established four settlements for members of these tribes : some success has already attended its efforts, and the prospects of the scheme are decidedly encouraging. The settlements established are Kot Mohkal in the Sialkot district, Changa Manga and Danepur in the Lahore district, and Chawa in the Ludhiana district. Kot Mokhal is occupied by some 1,000 Pakhiwaras, who are employed on agricultural operations and weaving. Chawa is now occupied by some 70 to 100 Sánsís, who are taking kindly to gardening, carpet-weaving and silk-reeling. At Changa Manga the wood-cutting is unpopular, as it involves hard and uncongenial toil, but silk-worm-breeding and silk-reeling have recently been introduced with success. Danepur, situated in Lahore itself, is the most recent venture, and one which, fostered by the personal interest of Sir Louis Dane in the undertaking, has a promising future before it. A dairy is being established there, which should not only prove a source of profit, but supply a want which has long been felt in Lahore. The other industries in this settlement are weaving, market-gardening and silk-reeling.

Publication.

310. Information concerning the criminal tribes has been brought together during the year in an excellent hand-book.*

20.—Criminal Justice.

General review of offences.

311. The total number of offences reported during the year 1911 was 204,347 ; of these 138,201 were returned as true. The number of cases brought to trial was 121,120, involving 281,315 persons. These figures are the highest yet recorded. The increase in true cases is chiefly under "offences against the Indian Penal Code," under which head 143,258 cases were reported and 75,093 were brought to trial. Although the year was one of scanty autumn rainfall, and most districts suffered from a short kharif crop and scarcity of fodder, the agricultural conditions are only partly responsible for the rise in the figures. As regards serious crime, the police report indicates the conditions of the year. Except in certain districts the returns are swollen by increased cases of assault, hurt, mischief and trespass. Insufficient use is made of the power of summary dismissal in petty cases and much time is wasted over this class of work.

Classification of offences.

312. Much of the serious crime already commented upon is due to the falling-off in the number of women, which is so marked a feature of the recent census and for which plague is responsible. This appears to have led to a general decrease in morality and consequent strife. The criminal courts manifest an utter inability to deal with matrimonial cases, and out of 12,059 persons brought to trial for offences of this character, only 783 were convicted. The increasing absence of ceremony multiplies the difficulties of the courts, and legislation is required to protect, by registration or some tangible form, the contract of matrimony.

* "Hand-Book of the Criminal Tribes of the Punjab," by Mr. V. P. T. Vivian, Assistant Superintendent of Police, published at the Punjab Government Press, Lahore, 1912.

Local and Special Laws.

313. The special features in cases under Local and Special Laws were the cases under the Delhi Durbar Police Act, an increase in cases under the Canal Act, and the cases arising from the enforcement of the Cruelty to Animals Act on the Murree road.

Miscellaneous proceedings under the Criminal Procedure Code.

314. In spite of the increase in false complaints of a petty nature, little use is made of the power to order compensation to be paid to the accused. The use of the section of the Code and the procedure for prosecuting false witnesses are capable of improvement, and appellate courts might be empowered to award compensation, which too should be enforceable in false petitions for the accused to be bound over to keep the peace. There is little doubt that the provisions of this preventive section are often grossly abused by complainants, leading to the very crimes which the section is intended to prevent.

Results in criminal trials.

315. A change has been introduced this year in the method of recording the results in criminal trials, and it is claimed that the new method gives a clearer indication than before of the real success or failure in bringing criminals to justice. Under the new system the percentage is calculated of the number of convictions and cases compounded on the total of such cases *plus* the acquittals or discharges after judicial inquiry or trial. For the past year the percentage is 71. Incidentally the figures collected show how large a number of cases are compounded each year, amounting in 1911 to 35,027. The number of compounded cases varies inversely with the number of cases summarily dismissed.

Jirgas.

316. The Dera Gházi Khan and Miánwáli districts report favourably on the working of the jirga system. As regards the latter district, the Sessions Judge highly praises the qualifications of the assessors, attributed by him to the training they get in making their reports in cases sent to them as a jirga.

Witnesses.

317. Compared with the lavish way a private complainant or plantiff has to treat his witnesses, the daily allowances given to witnesses for the Crown are exceedingly meagre, and the scant courtesy that they receive may be some explanation of the failure of prosecutions by Government. Perjury is rampant in the courts, and the present law does much to discourage prosecutions for this offence. However, a campaign against perjury would probably bring the criminal administration to a standstill owing to the length of the proceedings involved.

Appeals.

318. The Jail Report discloses that a far higher percentage of prisoners in the Punjab are released on appeal than is the case in other provinces. This is not borne out in the statistics of the criminal administration which shows that the percentage of sentences of all kinds reversed in the Punjab is not higher than elsewhere. The percentage of appeals rejected is 58 and of revisions 71.

Chief Court.

319. The Chief Court rejected a higher percentage of revisions, but accepted a higher proportion of appeals, while the number of appeals decided fell from 1,071 to 999. Death sentences in a year in which murders were more numerous than in any year during the last decade, except 1903, were fewer than in any year of the decade, with the exception of 1907-08. In 442 cases returned as true the capital sentence was finally confirmed on only 69 persons.

21.—Prisons.

Institutions.

320. There has been no change during the year either in the status or number of jails. There are now in the province 3 central, 21 district (including the Lahore Female Jail) and 8 subsidiary institutions. Arrangements are in progress, however, to reduce the district jails at Rohtak, Jhang and Dera Gházi Khan to the lower status, and the Lahore District Jail on conversion into a Borstal institution will become a central jail. With these changes the policy of concentration, which has been pursued for some years, will be brought within sight of finality and a considerable gain in efficiency accomplished.

Admissions.

321. The number of convict admissions to jails was normal at 16,607. The districts of Lahore and Ferozepore exhibit an unenviable pre-eminence in this respect. In addition 830 were received on transfer from other

provinces, chiefly the North-West Frontier Province, and a further 37 were passed through the jails on transit. The number of undertrial prisoners admitted was 19,705 exclusive of 3,317 admitted to the judicial lock-ups (10 in number) existing apart from jails. But deducting prisoners transferred between jails and lock-ups the net admissions were 21,161. These figures are largely in excess of those of the previous year. In addition 466 civil prisoners were admitted to the jails and lock-ups, including 9 women. The daily average jail population was 12,450 distributed over 10,992 convicts, 1,412 undertrial, and 46 civil prisoners. The average is an advance by 58 on the high figure of the previous year. The population gradually reached its maximum in November, but the release of 1,710 convicts who received a full pardon on December 12th, in connection with the Coronation Durbar, caused a sudden drop.

Classification.

322. The ratios to the free population borne by the convicts admitted during the year are ·31 for Christians, ·96 for Muhammadans and ·69 for Hindus and Sikhs. According to terms it is reported that 13,293 were awarded less than 12 months' imprisonment, and of them 3,298 one month or less. Previously convicted prisoners admitted numbered 2,087, about 13 per cent. of the whole, a ratio which has remained more or less steady during the last decade. It is calculated that the real criminal element of the province amounts to about 1,300 habituals, of whom about 1,000 are distributed amongst the various prisons.

Under trials.

323. The average period of detention was 23 days. The percentage of acquittals was 55·6; in other words, every second person admitted to jail under trial was ultimately acquitted. This result, coupled with the fact that 29 per cent. of all releases were releases on appeal, is the subject of comment.

Discipline.

324. Seven escapes from jail are recorded, of which one alone was from inside jail. New guarding arrangements have recently been introduced, with the result that breaking jail has now been practically stopped. Four escapes occurred among undertrial prisoners from the insecure subsidiary jails at Gujrat and Amritsar. At the same time imposition of fetters as a means of securing prisoners has been discountenanced as useless, and was only resorted to in 128 cases during the year. Generally speaking, the number of offences and severity of punishments awarded are decreasing. The Inspector-General's influence is towards considerate and extra-humane treatment, but the conduct of prisoners is probably really improving. Only 19 prisoners were sent for trial under Act IX of 1894, and "formal warnings" decreased. The total number of jail offences, exclusive of the above, was 30,024, and in only 36 cases was whipping resorted to as a punishment.

Convict officers.

325. The average number of convict officers employed amounts to 11 per cent. of the prison population. The conduct of the convict officers again shows improvement, and no case of abuse of the trust placed in them was brought to light. The work of this class of convict was systematised during the year, but the difficulty of meeting the demand was intensified by the Coronation releases.

Remissions and rewards.

326. Increasing resort is being had to the remission system for the reward of good conduct and the encouragement of industry. The 15-day remission was given for no punishment during the year in 1,664 cases, and 1,000 more "special" awards were given than in 1910. Gratuities to the value of Rs. 446-15-0 were distributed, and the sum would be greater if remissions were not considered a more valuable gift than money.

Financial.

327. The total expenditure on guarding and maintenance was Rs. 9,36,942, or Rs. 76-0-6 per head on the daily average strength. The cost to the Punjab Government of guarding prisoners sentenced by courts of the North-West Frontier Province, who numbered 1,543 at the close of the year, was Rs. 89,301. The imposition of this charge on the Provincial budget is felt to be a hardship. The reorganisation and increase in numbers of warders and advanced rates of pay to them and to Assistant Jailors have increased the cost of establishment. On the other hand, the cash earnings of the jails

amounted to Rs. 2,23,378, or Rs. 18-2-6 per head, and, in spite of the increase in expenditure, the average net cost per head has fallen to Rs. 57-14-0. That concentration is highly economical is shown by the fact that in the Lahore and Montgomery Central Jails the average cost per prisoner was Rs. 32-15-0 and Rs. 35-2-0, respectively. The indirect profit from the employment of convict labour on jail work was Rs. 3,84,588.

Jail industries.

328. The daily average number of convicts sentenced to labour was 10,881, of whom 7,215 were actually available for labour: of this number 1,050 were constantly employed on jail buildings and 442 on canal excavation under extramural rules. The balance were employed on manufactures, either for the department or for profit. The principal profit-making industries are paper-making (profit Rs. 31,444), lithographic printing (Rs. 27,217), reed screen-making (Rs. 17,238), munj mat, cotton durrie and carpet-making (Rs. 36,216), and oil-pressing (Rs. 11,809). Some progress also has been made with tent-making. The earnings per head of those prisoners who were sentenced to labour amounted to Rs. 20-8-0, which constitutes a further record.

Buildings.

329. The jail accommodation was for 14,470 which is sufficient for the daily average population, but frequently insufficient for class distribution and for Central Jail purposes. Steps are being taken to remedy this last defect, especially by the removal of 500 prisoners from Montgomery jail to a separate camp for work on the Lower Bari Doab Canal. Over and above the amount expended on special and annual repairs some Rs. 3 lakhs were devoted to jail buildings, the greater part of which was spent on the conversion of the Lahore District Jail into a Borstal Central Jail.

Health.

330. The number of prisoners admitted to hospital was 7,764, the average daily sick being 401. The general health was lower than in the previous year. Some anxiety is felt over the spread of tubercle, and something approaching a panic occurred in the Montgomery Central Jail where 144 cases were recorded. Much of the increase in this disease may be due to more careful examination of prisoners, but a specialist has made investigations and will report shortly. The death-rate was 26·42 per mille which, though lower than in the previous year, is not considered satisfactory. Exceedingly high death-rates occurred in the Lahore, Ambala and Delhi Jails.

Borstal Jail.

331. Preparations were actively advanced for the introduction of the Borstal system at Lahore. Juvenile adults, for whom the institution is designed, were employed on the building, and in the meantime classes for instruction were opened, education arranged for, and the staff organised. Arrangements have also been completed by which juvenile adults in the Borstal Jail will be permitted to spend the last 2—6 months of their term in the Danepur Settlement of the Salvation Army at Lahore. Here they will be able to earn money for the support of themselves and their families, and will be followed up with friendly and helpful influences after they have completed their sentences and returned to their homes.

Establishment.

332. The rise in the pay and status of the warder guard and jailor staff has had the best results. A better class of man is recruited in all branches of the service, and a better feeling has prevailed among the staff. The subordinate medical service of Sub-Assistant Surgeons is, however, unsatisfactory, and attempts are being made to render jail service less unpopular among this class. The title of Rai Sahib was conferred on Lala Ramditta Mal, Jailor.

22.—Civil Justice.

Institutions.

333. The total number of suits instituted was 182,182, about 8,000 less than in 1910. Whether this was due to the temporary action of good harvests, or to a partial failure of the kharif harvest in some districts, or to the action of the co-operative credit societies, or whether an era of general prosperity is setting in the Punjab which will place the debtor in a better position to pay his debts and so decrease the necessity for litigation, still remains to be seen. At any rate the decrease in institutions in the last two years

is a marked one, and it is to be hoped that the causes which have led to it are of a permanent character, and that the passing of the Civil Panchayats Act by checking litigation and helping in the disposal of petty suits may co-operate in a further much-to-be-desired decrease in civil litigation. The total value of suits instituted was Rs. 3,10,15,031, an average of Rs. 170. One suit of over Rs. one lakh in value was instituted in each of the districts of Delhi, Lahore, Kangra, Multan and Lyallpur.

334. Under pre-emption suits the decline has been 1,336, the number now reported being 4,262. Judicial opinion is strongly in favour of abolishing the right of pre-emption with its unsatisfactory incidents. Matrimonial suits, though decreasing in numbers, continue to give trouble, and it is apparent that women are becoming alive to their rights under their personal law. The frequent absence of a tangible form of ceremony causes much difficulty, and a system of marriage registration is desirable. The benefit which may be anticipated from the Provincial Insolvency Act (III of 1907) is at present to a great extent nullified by the failure of many courts to understand its provisions. Much time is spent, perhaps to a large extent uselessly, on work connected with the Guardian and Wards Act, but it is hoped to effect an improvement in this respect under the proposed entertainment of District and Sessions Judges. **Classification.**

335. Disposals of original suits again fell, and now number 192,115 out of 218,656 for disposal. Original cases pending at the close of the year were 33,028, an increase of 2,373, though the numerical strength of the courts has been maintained. The appellate courts show better results, and here the pending file was reduced. The increasing tendency to issue commissions for the examination of witnesses is remarked. The local commissioner is often a person absolutely ignorant of the value of evidence, and it is not satisfactory to find that the courts are developing a tendency to divest themselves of their proper responsibility in this way. **Disposals.**

336. The amount realised in execution proceedings was Rs. 51 lakhs, the percentage for the province being 27. Some doubt is felt as to the accuracy of the figures, especially in respect of payments made out of court. It is generally held that ministerial establishments are underpaid, and that from the ill-paid agency a high standard of honesty is not to be expected. In the circumstances the amount of relief granted by the courts may be considered as satisfactory as could be expected. **Execution.**

337. In the Chief Court the pending file has again risen, and the congestion of work in the Court has approached still nearer to that which necessitated the appointment of four extra Judges in 1905. The appointments of the 6th and 7th Judges have been continued for two and one years, respectively. Alterations in the law of appeal have relieved the Court of much petty appellate work as is shewn by the fact that the average number of civil appeals disposed of by each Judge has fallen from 426 for the seven years ending 1890 to 266 for the decade ending in 1900, and again to 172 in the following ten years. **Chief Court.**

338. Receipts from process fees amounted to Rs. 5,09,196 and expenditure to Rs. 2,48,448. The fact that a profit of Rs. 2,60,748 is derived from this source provides an argument for raising the salaries of the establishment paid from process fees, while possibly the fees themselves might be enhanced without any difficulty. The delay in service of process is a frequent cause of the dilatoriness of subordinate courts, and the extension of the sub-divisional system in districts appears to add to the delay. As to the court itself, the position too frequently is that the case is heard piecemeal as documents are dragged out of a reluctant party, and processes are issued compelling the attendance of witnesses from remote parts. Neither the litigant nor his pleader prepares the case beforehand, and the latter, so far from being properly briefed, is often engaged a few minutes before the case is called before the court for settlement of issues. The court is faced with two alternatives: either to refuse to grant adjournments in order to enable negligent parties and perfunctory pleaders to produce documents, which should have been obtained before the **General.**

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suit was filed, or else to attach the same value to time as do the parties themselves, and adjourn freely. In the first case the result is that the suit is decided upon an incomplete record, and in the second that there is no proper trial of the action.

23.—Registration.

General business.

339. The decrease in the number of compulsory registrations which began in 1910 has continued during the year under report. The total number is 67,672 as compared with 70,574 last year. The decrease is nearly all under the head "Mortgage," and the principal cause is probably the failure of the kharif harvest, which checked redemptions and re-mortgages for enhanced consideration, but other contributory causes are plague, the growth of co-operative credit and the rapidly increasing tendency to dispense with compulsory registration where a mutation has to be entered. This tendency may necessitate an early reconsideration of the decision arrived at in 1909 to leave the registration of deeds and the mutation of rights in the record-of-rights on their present footing. The number of optional registrations continues to decline, and the decrease, which is all under registrations affecting immovable property, is due to the growing confidence in mutation proceedings. An enormous increase in the value of instruments of lease was occasioned by the high prices obtained in Delhi for houses leased for the Coronation Durbar. Awards also show an increased value of Rs. 5 lakhs due to large awards in the Delhi and Amritsar districts.

Land Alienation Act.

340. Instruments which contravene the Land Alienation Act continue to engage, and in some cases to evade, the vigilance of registering officers. These frequently take the shape of "*benami*" transactions, but the most difficult to detect are mortgages purporting to be in the form permitted by section 6 (1) (*a*) of the Act which by implication however do not permit redemption within the fixed period and so contravene section 7 (3).

Income and expenditure.

341. Income from registration fees has fallen by Rs. 9,472 to Rs. 2,58,045 owing to the decrease in the number of registrations. The total receipts from other sources have risen by Rs. 2,872 to Rs. 34,418 : so the total income is Rs. 2,92,463 and the total decrease in income is only Rs. 6,600. The total expenditure appears as having fallen by Rs. 3,692 to Rs. 1,35,166, but this result is due to a decrease of Rs. 5,773 in the estimated cost of the office of the Inspector-General of Registration, who is no longer Registrar of Joint Stock Companies. There has really been an increase of expenditure amounting to about Rs. 2,084, which falls under the head of permanent establishment. This increase was occasioned by the increase to Rs. 15 per mensem of the pay of muharrirs formerly drawing Rs. 10 or Rs. 12 only.

23 A.—Legal Affairs of Government.

Opinion work.

342. The references for opinion disposed of by the Legal Remembrancer amounted to 856. The Irrigation Branch of the Public Works Department was responsible for 338 of these and Government for 198. In all sixteen different departments sought the advice of the Legal Remembrancer during the year. The increasing complexities of the administration involve more frequent recourse to legal advice, and the cases referred were largely in excess of the previous year's figures.

Civil business.

343. During 1911 the Government was plaintiff in 36 original civil and revenue actions, instituted 25 appeals and defended 185 original cases and 48 appeals. The majority of cases defended by Government were references under the Land Acquisition Act, mainly in cases of acquisition by the North-Western Railway. In the majority of these cases the Collectors' awards could not be upheld, and in round figures they were raised from Rs. 3 lakhs to Rs. $4\frac{3}{4}$ lakhs. A total enhancement of Rs. 1,40,000 was ordered on account of land acquired for the railway near Lahore and Shahdara, where the Land Acquisition Officer's awards were undeniably too low.

Criminal business.

344. In the Chief Court the Government Advocate prosecuted in one original trial and obtained a conviction. In the appeals of 501 persons which were dealt with by the law officers 75·6 per cent. were decided in favour of the Crown. In 79 revision applications and 23 miscellaneous the percentage of success was 78·4 and 95·6, respectively. In 112 murder references in which capital sentence had been passed, confirmation of the extreme penalty was obtained in 58 cases only.

In subordinate courts the Assistant Legal Remembrancer was deputed to prosecute in 3 original cases and in 13 appeals, successfully in 2 and 10 cases, respectively.

24.—District and Local Boards.

Elections.

345. The usual indifference has been shown in the elections for the various district boards. Opinions were recently invited on the question of extending the elective system in those boards where all, or the majority of, the members are appointed; but the replies of the local officers shew that the time is not yet ripe for an advance in this direction. So long as the leading men prefer nomination to election, the substitution of the latter for the former method of appointment would lower the status of the boards and make them less representative than they are at present of the true public opinion of the rate-payers. It remains to be seen whether the extension to district boards of the franchise for the Provincial Legislative Council will engender sufficient competition to induce the leading land-holders to submit to election for seats on the boards. For the present it is necessary to retain a large nominated element in this new electorate to the Legislative Council.

Meetings.

346. The number of meetings held has been sufficient in most cases, but the Kángra board failed to hold the requisite number, and in Delhi, Lyallpur and Shahpur only 5 meetings were convened. The average attendance has improved in almost all districts. This does not appear to be due entirely to a greater desire on the part of members to attend to their public duties. One reason attributed is the grant of travelling allowance to members, and the holding of occasional meetings elsewhere than at district head-quarters has been popular in various cases.

In Muzaffargarh the local boards failed to meet at all. As these boards have been found to serve no useful purpose proposals for their abolition are under consideration.

Working of the boards.

347. The working of the district boards throughout the year has been satisfactory. On the whole it would appear that, though more interest is being taken by members in their work and that free discussion is slowly beginning to supersede apathetic concurrence, yet it is in only few districts that members are prepared to go beyond mere discussion and to give any real practical assistance. The custom, however, of entrusting petty work to members in their own circles is extending with generally satisfactory results. As the Deputy Commissioner of Montgomery remarks "the practice of freely admitting to the agenda projects whose utility is doubtful promotes healthy discussion. Nothing is more paralysing than the feeling that every project on the agenda must inevitably be passed."

Devolution of work.

348. The system of delegating powers to sub-committees and members is being extended with good results. Finance sub-committees exist everywhere. As a general rule, they confine themselves to one meeting for the preparation of the annual budget, but their duties are wider in some districts. Tahsil sub-committees are also becoming popular, and have been formed lately in Multán and Hissar. There is a growing tendency also for boards to take up general questions dealing with the prosperity of the district. In Rohtak samples of agricultural machinery were bought for demonstration. In Delhi, Montgomery and Ambála sub-committees were constituted to inquire into the question of improving the breed of cattle. In the north of the province, however, devolution of district board work has not been successful.

Education.

349. The scale of teachers' salaries has been revised and improved in almost every district. Training schools for teachers have been started in Gujránwála, Lahore and Hissar. With the improved prospects and regular training a better stamp of men will be forthcoming as teachers in primary schools. In Lyallpur 25 new schools were built during the year, but this was not sufficient to meet the demand, and in Jullundur and Siálkot numbers of children had to be refused admission.

Medical.

350. New dispensaries have been opened at Chabbal (Amritsar), Pattokí (Lahore), Dunera (Gurdáspur), Naráingarh (Ambála), and a new eye ward was constructed at Moga (Ferozepore). Twenty-eight Plague Officers are provided with camp hospital equipment, and give medical relief while in camp. In Gurdáspur an itinerant Sub-Assistant Surgeon has been engaged for the medical inspection of schools, whilst in Hissar an itinerating dispensary for general use has been sanctioned.

Veterinary.

351. Veterinary hospitals are everywhere increasing in popularity. Nine have been constructed during the year and two more are in progress. Increased attention is being paid to cattle and horse breeding.

Arboriculture.

352. Satisfactory attention is being paid to arboriculture, and definite programmes for planting have now been laid down. The difficulty of obtaining an adequate supply of canal water is one of the chief obstacles to success, but there is also a general need for greater care of the young trees. Probably more expert supervision is required. In Hoshiárpur a retired Forest Ranger is employed, and other district boards might imitate this example. In Gurdáspur and Gujránwála an attempt is being made to combine arboriculture and sericulture by planting mulberry trees. The mulberry as a roadside tree has disadvantages, and the success of the experiment is doubtful. In many districts much damage was done to the avenues by throwing them open to lopping in the summer of 1911. In many cases this was done without due supervision, and the avenue trees were apparently largely lopped for goats and camels, while zamindars' trees remained unlopped. Greater care will be necessary should it become advisable to resort to this very destructive measure of relief.

Village sanitation.

353. Efforts are now being made in several districts to tackle the long neglected problem of village sanitation. In both Karnál and Montgomery schemes have been framed for providing conservancy staff in some of the larger villages, the cost being met partly from the funds of the board and partly by the imposition of a small tax on the village. This system is reported to be working well, especially in Montgomery. Great caution is, however, desirable in making such experiments, and special village taxes should not be imposed unless it is certain that the villagers do not object to them. Compelling village communities to pay for sweepers, whose services they do not desire or appreciate, is not really consonant with the spirit of local self-government. Great reforms are undoubtedly desirable in the sanitation of rural areas, but it is inexpedient to force them in advance of public opinion. The habits of centuries are not easily changed, and the reformer's first task is to convert the people. The villager must be convinced that filth produces and fosters disease before he can be induced to observe the rudimentary principles of sanitation.

Special activities.

354. The Lyallpur district board has assumed control of two movements of social reform, namely, the Sikh Temperance Association and two societies for the restriction of expenditure on social ceremonies. The members of the board for the time being form the standing committee for each society, with power to add to their number. It is a hopeful sign that the members of the district board of this young and progressive district should associate themselves with philanthropic movements, outside the ordinary routine of the board's duties. This board has also assumed control of the fund of the local King Edward Memorial, and has been able to make good use of the money in works of medical aid.

Future devolution.

355. The utility of local or sub-district boards has been considered during the year in connection with a scheme of devolution framed by the Royal Commission on Decentralization. District officers were practically unanimous in thinking that the old local boards were generally a failure in the Punjab and should not be revived. The financial dependence of these boards on the district board made it impossible for them to exercise any real function of local self-government. Owing to the small average size of districts in this province, the district board is probably the smallest unit that can usefully be constituted with independent financial powers, and the proper line of devolution is in the formation of local sub-committees and not of separate sub-district boards. For instance, in sub-divisions the officer in charge and other members of the board in the sub-division might form a sub-committee to consider local needs and supervise all district board works within the sub-division.

25.—Municipal Administration.

General.

356. The most important feature of the year under review is the introduction of the new Punjab Municipal Act, which came into force on 1st October 1911. It has remedied certain defects in the old Act, and has extended the powers of municipal committees in various useful directions. The question of the reduction of the smaller notified areas has been further considered, with the result that in the Rohtak district 8 notified areas have been removed from the operation of the Municipal Act. In Gurdáspur also similar proposals have been formulated. In the rest of the province district officers have generally reported that the inhabitants of small towns have shown no marked desire for the abolition of municipal institutions. New notified areas were established in the colony towns of Jaranwála (Lyallpur) and Phularwán (Shahpur) and in the new Dera Gházi Khan. The notified area of Gojra (Lyallpur) was converted into a municipality.

There are now 107 municipalities and 104 notified areas in existence. The population within the limits of the former is 1,878,417 and of the latter 373,016. In 74 towns the committee is appointed partly by election and partly by nomination, in 32 by nomination only, while in Kasumpti (Simla) the Deputy Commissioner administers the funds. In notified areas there are no elected members of the committees. The total number of members is in municipalities 1,224 and in notified areas 489.

Elections.

357. The reports on municipal elections disclose a general apathy and indifference on the part of the public, except where party or sectarian feeling runs high. Probably, however, seats are contested privately to a greater extent than appears from the reports, the unsuccessful candidates withdrawing when they find that their canvass does not lead them to expect a majority. In Lahore and Amritsar there were keen struggles for election. In Lahore the contests were under the new election rules, which are reported to have worked satisfactorily on the whole. It is, however, somewhat doubtful whether they provide sufficient safeguards against the admission of fictitious or unqualified voters, especially if departures from the rules requiring personal registration are permitted without adequate precaution. In Wazírabad, where sectional representation is in force, there were 11 candidates for one seat, and polling is said to have been very keen. The sectional system of representation introduced at Fázilka hardly appears to have had the desired result. The city was divided into wards, the object being to secure adequate representation of the Muhammadan minority. No member of that community has, however, been elected, although one of the wards contains a large Muhammadan majority. As a result of the apathy of voters in Murree and the unsatisfactory working, of the committee, the constitution of that committee was changed, the number of *ex-officio* members being increased from 4 to 7, while 7 nominated and 2 elected members replace 8 elected members.

Meetings.

358. The number of meetings held in most municipalities and the average attendance are generally satisfactory. In Delhi there were 60 meetings, in Lahore and Amritsar 23 each, while the Simla committee held 52. Most of the minor municipalities held the prescribed number of meetings, though there were some notable exceptions, of which Chiniot (Jhang) and the notified area of Ramdás (Amritsar) are conspicuous. The change in the constitution of the Murree committee has not apparently induced the members to take much interest in municipal administration. The average attendance is only 49 per cent.

Appointment of non-official Presidents.

359. The proposal that non-official Presidents should replace officials in the majority of the smaller municipalities has been referred to Commissioners and Deputy Commissioners, but the enquiry has not brought to light any general desire on the part of the people to be freed from official guidance. Some officers have expressed the opinion that local self-government would collapse without such guidance, and that the more primitive the local body the greater is the necessity for official control. It appears that, for the present at any rate, efficiency is not compatible with unguided local self-government in small municipalities and notified areas, and that the abolition of the official President would lead to a falling off in efficiency. Where, however, the President is an absentee, some inefficiency is inevitable, and it is probable that it would not be seriously increased in all cases by the appointment of a local non-official President. Commissioners having accordingly been instructed to examine and report on all cases where the President is a non-resident official.

Working of committees.

360. The working of committees is reported to be satisfactory generally, and sub-committees continue to do good work in most municipalities, the Delhi sub-committees being especially noticeable with 88 meetings. The good work of the Vice-Presidents of the Ambála committee—Lala Ganga Ram and M. Ali Muhammad—is again brought to notice. On the other hand, the Khanna (Ludhiána) municipality is reported to have long been notoriously inefficient. Lyallpur has been unfortunate in suffering from the defalcation of two successive treasurers, and the accounts of the Khusháb (Shahpur) committee are in confusion.

Sectarian feelings and personal enmity are reported to have caused trouble in Hánsi and Bhiwáni (Hissar), Rohtak and Gohána (Rohtak), and in Gujrát and Jalálpur Jattán (Gujrát), but it is satisfactory to find that these developments have been less noticeable than usual in municipal affairs. No important over-rulings of resolutions are reported though in a few cases committees have been asked to reconsider their decisions. An attempt has been made in Dalhousie to secure greater continuity of administration by enlarging the limits of the sub-division and appointing a Sub-Divisional Officer for two years, and perhaps something of the kind may be successful in Murree, where for some time past municipal administration has not been very satisfactory.

Bye-laws and rules.

361. The important sanitary question of the regulation and supervision of stables and cow-houses has been attended to in Lyallpur and Murree, where bye-laws have been framed for that purpose. Lahore and Rawalpindi have passed new bye-laws for dealing with hackney carriages, and Murree has made rules relating to motor-cars and the storage of petroleum. The extension of the Vaccination Act to the Ferozepore district has led to new bye-laws in Fázilka, Muktsar and Dharmkot. In a few of the larger municipalities an important amendment to the rule of the Municipal Account Code has been introduced, which lays down that in dealing with claims for the refund of octroi no proof whatever of the payment of the tax shall be demanded. As the Postal Department is unwilling to assist municipal committees in assessing and recovering octroi on articles imported by post, unscrupulous traders are enabled to evade octroi by means of the parcels post and to obtain refunds of a tax which they have not paid. Government has therefore sanctioned a relaxation of the Code rule, and authorized certain com-

mittees to demand proof of previous payment of octroi in the case of a few specified articles which, owing to their light weight and high value, offer special facilities for this form of fraud.

TAXATION.

General. 362. Octroi is in force in 102 municipalities, and continues to be the chief source of municipal revenue. In 14 towns there is a tax on animals and vehicles, in 10 on houses and lands, in 4 on servants, in 2 on roads and ferries and in 1 on shops and stalls at annual fairs. Six towns impose a water-rate and 4 a conservancy tax, but there is no lighting rate in any town nor tax on professions and trades. Octroi is the least unpopular form of taxation in the Punjab, but there is difficulty in obtaining sufficient income from octroi in small towns, especially where agricultural land is included within octroi limits. The obvious gain to the owners of the land furnishes a strong motive to a small committee to abstain from remedying a condition so detrimental to octroi income. House taxes continue to call forth bitter complaints from those who are compelled to pay them, but the unpopularity of this tax may possibly be mitigated if greater effort is made to assess it in a less arbitrary manner. An experiment is being made in a notified area in the Siálkot district. Here area will be made the basis of the tax, but the locality and quality of the building and the class of the residents will also be taken into account. The result will be watched with interest. Doubts have arisen as to the legality of some of the taxes in force in many notified areas, and towards the end of the year instructions were issued for the revision of these taxes where necessary.

New taxes. 363. New taxes were imposed in Batála where a frontage tax was imposed on houses within municipal but outside octroi limits; and in Siálkot where a wheel tax and a toll on vehicles entering the municipality has been enforced. Difficulties are experienced in the collection of the wheel tax. The conservancy tax, introduced last year at Simla, brought in about Rs. 4,500 less than was expected, and it is estimated that some 2,000 to 3,000 persons entering and even residing in municipal limits evade payment. This tax has replaced the old servants' tax, which in 1910-11 brought in a revenue of Rs. 21,754. The conservancy tax has only produced an increase of Rs. 13,855, and apparently the cost of the special staff employed to collect it amounts to 30 per cent. on this increase. This result can hardly be regarded as satisfactory from a financial point of view, though the greater control obtained over the floating population of Simla may compensate for this by greater efficiency in sanitation and administration.

Octroi schedules have been revised in Gurdáspur, Gujránwála, Montgomery, Kamália (Montgomery), Ferozepore, Ráhon (Jullundur), Kharar (Ambála) and the municipalities of Shahpur district.

Octroi. 364. The working of octroi has generally been satisfactory, but there are some marked exceptions and embezzlements were brought to light in Siálkot and Ráwalpindi, the former resulting in the trial of a member of the committee and his son and a wealthy trader and contractor of the town. The trials were not completed by the end of the year under report. Receipts from the tax have risen in Lahore by 7·5 per cent., in Amritsar by 3·80 per cent., and in Delhi by 19·30 per cent. Most municipalities record an increase, and decreases have been satisfactorily accounted for. The cost of collection is not unreasonably high except in small towns.

Refunds. 365. Several minor municipalities continue to disregard the necessity of granting refunds. In Dharmkot (Ferozepore) none have been given, it being explained that funds do not permit; whereas the balance at the credit of the committee is in excess of the prescribed minimum and the cost of collection is unduly high. Jagádhri has also gone through the year without granting any refunds, the reason in this case being that, by mutual agreement between the committee and the local traders, no one applies for a refund. The percentages of refunds varied considerably through the province. In Khanna (Ludhiána) it is as low as 2·8 per cent. on the gross receipts, while

at Ballabgarh (Delhi) it is 46·3. The percentage is high in other towns indicating either that through trade is being taxed or that the arrangements for granting refunds are lax and require better supervision.

Health.

366. The year was generally a healthy one, but plague and small-pox were prevalent, the former being the cause of high mortality in the towns of the Delhi division.

Improvements.

367. In Lahore eleven additional supply wells are being sunk, and a large sewage scheme is under consideration. Streets are being widened and proposals for providing an up-to-date and properly equipped fire brigade and for the construction of a tuberculin dispensary occupy the committee's attention. In Amritsar the experiments in the sinking of tube wells have been highly satisfactory, and it is found that one of these sunk in one of the old wells of the water-works more than quadruples the supply and provides a means of dealing with the failing water-supply. The scheme for reclaiming the swamps (*dhábs*) is progressing successfully and a detailed scheme of up-to-date under-ground drainage of an area of 61 acres is being prepared. In Delhi the most important work was the extension of the water-works which was efficiently carried out in time for the Coronation Durbar. Improved water-supply schemes are being worked out for Siálkot, Khusháb (Shahpur) and other towns.

26.—Military (Volunteering).

The Punjab Light Horse.

368. The Punjab Light Horse consists of six troops, of which one is formed of reservists, and a detachment at Delhi. The enrolled strength on March 31st, 1912, was 417, composed of 29 Officers, 44 Non-Commissioned Officers, and 344 troopers: the total number of efficients being 387.

The 1st Punjab Volunteer Rifles.

369. The 1st Punjab Volunteer Rifles consists of 13½ companies, including a reserve company and 2½ cadet companies. There is also an additional school section at Murree. Three and a half companies are at Lahore, two at Murree and the others at Ráwalpindi, Amritsar, Delhi, Pesháwar, Ferozepore, Srínagar and Siálkot. The enrolled strength on March 31st, 1912, consisted of 56 Officers, 104 Non-Commissioned Officers, and 976 privates: 1,136 in all, of whom 1,066 were efficients.

The Simla Volunteer Rifles.

370. The 2nd Punjab (Simla) Volunteer Rifles has an establishment of 9 companies, including 2 cadet companies, and a reserve company; 2 companies, one of cadets, being at Sanáwar, near Kasauli. The enrolled strength on March 31st, 1912, was 48 Officers, 75 Non-Commissioned Officers, and 568 privates: 652 out of the total of 691 being efficients.

The North-Western Railway Volunteer Rifles.

371. The North-Western Railway Volunteer Rifles has 14 companies, including the reserve company; 6 of these, however, are stationed outside the Punjab. Four companies are at Lahore, 2 at Karáchi and the rest at Multán, Ambála, Saháranpur, Kotri, Quetta, Ráwalpindi and Sukkur. The enrolled strength on March 31st, 1912, was 52 Officers, 121 Non-Commissioned Officers and 1,432 privates: 1,605 in all, of whom 1,571 were returned as efficients. It is intended to divide this corps into two battalions shortly.

Inspection.

372. The Punjab Light Horse, the 1st Punjab Volunteer Rifles and the North-Western Railway Volunteer Rifles were inspected in February 1911. The 2nd Punjab (Simla) Volunteer Rifles were inspected in October 1911. The results were considered satisfactory.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1912.

(2) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1911-12.

(3) Annual Report of the Government Cattle Farm at Hissar for the year 1911-12.

(4) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1911.

(5) Report on the working of Co-operative Credit Societies for the year ending 31st March 1912.

Weather and Crops.—(1) Report on the weather of the Punjab for the year 1911-12.

(2) Punjab Season and Crops Report for 1911-12.

Horticulture.—Report on the Government Agri-Horticultural Gardens, Lahore, for the year ending 31st March 1912.

Forests.—(1) Progress Report of Forest Administration in the Punjab for 1911-12.

(2) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1911-12.

No special report on arboriculture was issued during the year.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1911.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year ending March 31st, 1912.

(2) Report on the External Land Trade of the Punjab for the year 1911-12.

(3) Report on the Joint-Stock Companies in the Punjab for the year 1911-12.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1911-12.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1911-12.

(2) Revenue Report of the Irrigation Department, Punjab, for the triennial period 1908-09 to 1910-11.

(3) Land Revenue Report as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—(1) Statistics of British India, Part II, Commercial (Co-operative Credit Societies).

(2) Administration Report of the Army Remount Department in India.

Crops.—(1) Agricultural Statistics of India, volume I, tables 2-I and 3-I.

(2) Area and yield of certain principal crops in India.

(3) Prices and Wages in India.

(4) Variations in Indian Price Levels, 1912.

Forests.—Statistics of British India, Part IV (*b*), Finance and Revenue.

Mines and Quarries.—(1) Statistics of British India, Part I, Industrial.
(2) Records of the Geological Survey of India, volume XLII, Part III.
(3) Report of the Chief Inspector of Mines in India under the Indian Mines Act (VIII of 1901) for the year ending 31st December 1911.

Manufactures.—Statistics of British India, Part I, Industrial.

Trade.—(1) Accounts of the Trade carried by Rail and River in India.

(2) Statistics of British India, Part II, Commercial (Joint-Stock Companies).

Railways.—Administration Report on Railways in India for the calendar year 1911.

Irrigation.—Statistics of British India, Part III, Commercial Services.

27.—Agriculture.

SCIENTIFIC.

Research and experiment.

373. Research and experiment now cover a wide field and, in spite of unfavourable conditions, much useful work has been done at the Lyallpur and Gurdaspur Stations. The principal investigations concern the most valuable crops,—wheat, cotton and sugarcane. The survey of the various wheats in the province continues. Milling and baking tests have been arranged with interesting results, and an attempt to ascertain the home market value of selected red wheat was made, which, if persisted in, may give valuable information. The reports on American cotton are encouraging, and there can be no doubt that, with a favourable season, good results should be attained. The completion of Mr. Barnes' analysis of the Gurdaspur sugarcane will be looked for with interest. It is open to doubt whether the problem of safeguarding cotton from bollworm and sugarcane from moth borer has been tackled with sufficient energy. No question is of more importance than the protection of these valuable crops from insect pests, and hopes are entertained that it will not be long before more definite results are arrived at. The unusual demand for Indian barley in Europe has stimulated interest in this crop which, though not widely grown, is of prime importance in certain tracts of the south-eastern districts. Satisfactory progress has been made in the improved cultivation of date-palms. The attempt to introduce Arabian dates is meeting with unexpected success as the imported trees are fruiting already.

Sanction has been given to the experiment for reclaiming kallar soil, which the Agricultural Chemist, Mr. Barnes, has proposed after five years' investigation into alkaline soils. Some 85 acres of the worst affected land will be taken up in the Lyallpur Colony. A number of mole drains, 200 yards long, will be ploughed across it at intervals of 8 yards, opening into a central drain. The land will then be flooded heavily enough to wash out the salts, and the alkaline water will be carried off into a shallow tank at the end of the open drain. It is hoped to start the experiment next cold weather, if the necessary plant arrives from England in time.

Pests.

374. Bollworm (*Barias insulana*) appeared in the cotton of the Delhi division, of the Lyallpur district, and of the Jhelum Colony, in great numbers, and in other districts less formidably in the end of July and beginning of August. Bollworm parasites were obtainable nowhere in India. Accordingly at first the only thing to be done was to advise the cultivators to pick off and burn or bury all infected bolls and buds. Parasite boxes were sent out to be filled with bollworm-affected cotton in the hope that the parasites might appear in the boxes and escape into the fields and breed. What saved the situation, however, was undoubtedly the heavy winds and rain which visited the province in the last few days of August. These apparently swept and washed the plants clean of infected bolls, eggs, and pupæ and drowned them upon the ground. Parasites were not found till September 6th, although consignments of infected bolls were being sent in regularly from many districts to Lyallpur for examination. Where bollworm was prevalent the first two pickings were entirely lost, with the result that the first cotton came to the mills very late. American cotton in the Lyallpur district suffered much less than country cotton because the outbreak of the disease occurred during the flowering season, and the flowering period of American cotton is longer. The cotton plants flowered and fruited most abundantly in the end of the season to make up for lost time, but frost prevented ripening in some districts.

The damage done to sugarcane by the moth borer is serious. Maize and jowar were sown as trap crops and the expediency of cutting the dead hearts of the young cane was also tried. These methods appear likely to give good results, but the experiments are not yet complete.

Demonstrations.

375. Owing to want of staff, demonstration work was restricted during the year. At Lyallpur classes for instruction in the use of the reaper were held in April. Demonstrations of implements were carried out in Gujránwála,

Gurdáspur, Jullundur, Hoshiárpur and Ambála. At the close of the year under report steps were taken towards renting a plot of typical barani wheat growing land in the Attock district with a view to demonstrating on the spot the improved methods of cultivating barani wheat, which gave such striking results on the Gurdáspur farm last season. This farm will be in charge of an agricultural assistant, who, in addition to supervising work on the farm, will be available for conducting demonstrations in neighbouring tracts. The Director has introduced in 11 districts his scheme for bringing District Officers and the cultivator into close relations with the work of the Department by means of agricultural associations. While admitting the value of agricultural associations presided over by Deputy Commissioners, the Financial Commissioner considers that the future both of the Agricultural Department and of the co-operative societies lies in their mutual interdependence. This is a principle which formed the subject of a resolution at the last Pusa Conference. It is satisfactory, therefore, to note from the Deputy Director's report that with an increased staff of agricultural assistants organised demonstrations are now to be conducted in villages where co-operative societies exist.

376. Progress has been made in the production and distribution of labour-saving machinery and in well boring. One of the main functions of the agricultural associations mentioned in the preceding paragraph will be to familiarize the Punjab cultivator with the use and advantages of the improved types of tillage implements. On the whole the progress made with well boring has been satisfactory, and if one or two sets of deep boring and rock cutting plant are purchased, the coming year should show still better results. The most unsatisfactory feature of the year's work is the large number of days during which the borers remained idle for want of work or for want of labour. Out of a total number of 5,055 days, only 1,230 were spent in boring, while 1,225 days were wasted for want of work and 873 days for want of labour. The efficient management of well boring operations and the development of irrigation by tube wells and oil engines, however, can never be properly carried out until a properly qualified agricultural engineer is appointed. **Agricultural engineering.**

377. A valuable contribution to the stock of agricultural knowledge has been provided by Sir James Douie in his Monograph on Fodder Crops of the Punjab published in the early part of 1912. It is pointed out that some 14½ millions of horned cattle depend for natural grazing on 18 million acres of waste, much of it of poor quality, which they have to share with 4½ million sheep and 4½ million goats. A very large acreage has accordingly to be devoted to raising fodder crops for cattle. **Fodder crops.**

378. An officer was on special duty during the year in connection with pisciculture. After studying the methods employed in America and Madras he returned to the Punjab in December. **Pisciculture.**

For the conservation of indigenous species the directions in which it is proposed to take action are threefold. First the provision of adequate ladders at all weirs on the main rivers, which obstruct the free movement of migratory species; secondly, the protection of the spawning grounds; and, thirdly, the prevention of the wholesale destruction of fry and immature fish in the canals during closures. There are probably few countries in the world which can compare with the Punjab with its thousands of miles of harnessed rivers as a field for rough-and-ready methods of pisciculture, and the indigenous species are mostly so hardy and so prolific that with reasonable protection through the egg and larval stages they cannot fail to increase and multiply.

Brown trout have been introduced into the Beas in Kulu, certain tributaries of the Beas in Kángra, into the Giri and various other hill streams. The species thrives well in Kulu and Kángra, and makes very rapid growth, as yearlings of ¾lb. weight and four year old fish of four pounds and over have been caught. The Kulu stock ponds have been enlarged and improved. With the properly constructed hatching troughs, which are being made, and with the aid of a trained hand from Kashmir, it is hoped to show good results next winter.

Sericulture.

379. No progress has been made in the methods of rearing silk worms. Country seed is hatched in enormous quantities, much increasing the risk of disease. Measures are being taken to stop the rearing of this seed. It is hoped to extend rearings to Kángra and Siálkot in the near future, in places where hereditary insanitary practices do not delay progress.

Loans to Agriculturists.

Advances made.

380. Rupees 1,45,262 were advanced under the Land Improvement Loans Act (XIX of 1883), chiefly in Multán, Attock, Montgomery, Gurgaon and Muzaffargarh for sinking wells and in Attock and Gurgaon for the construction of embankments also. No advances were made in Delhi, Karnál, Hoshiárpur, Lyallpur or Jhang. Under the Agriculturists' Loans Act (XII of 1884), Rs. 1,89,466 were advanced mainly in Siálkot, Miánwáli, Muzaffargarh, Montgomery and Dera Gházi Khan. No advances were made in Hissar, Rohtak, Delhi, Hoshiárpur, Jullundur, Lyallpur or Jhang. Large advances were made in Siálkot owing to the loss of cattle through disease, and to the failure of the kharif crop of 1911, to meet which timely advances for fodder were arranged. Advances under the Loans Acts were naturally small in a year unmarked by special calamities. The total amount outstanding under both Acts is only Rs. 17 lakhs, which is less than the amount advanced in the one year 1907-08. The interest due was recovered without difficulty.

The profit to the Provincial Government representing the difference between the rate of interest (3½ per cent.) charged on mean outstandings by the Government of India to the Punjab Government and the rate of interest charged by the Punjab Government to the agriculturist borrowers (6¼ per cent.) was Rs. 31,686.

Co-operative Societies.

General.

381. Progress has been well maintained during the year in spite of an obstacle, afterwards removed, imposed by a decision that unions of societies could not be registered under Act X of 1904. At the close of the year there were 12 Central Banks, 14 Unions, 26 urban societies and 1,721 rural societies. During the year the new Act (II of 1912) was substituted for the previous Act regulating the control of these societies.

Central Banks and Unions.

382. Four new Central Banks and 13 Unions were registered in 1911-12. Between them these 26 institutions lent out to the smaller societies over Rs. 11 lakhs during the year. The most interesting feature in connection with Central Banks and Unions is the fact that they have come into touch with the commercial world by obtaining, so far in 8 cases, cash credits with the Bank of Bengal to the amount of Rs. 3 lakhs, of which Rs. 1½ lakhs have been drawn. As regards the relative value of a Central Bank and a Union, the former is usually of more use for the supply of money during the first year of co-operative work in a district; later on, Unions are more valuable as organisations, inasmuch as they are purely co-operative and more sympathetic in character. Experience shows that there is no reason why both should not exist together harmoniously in the same district. Whether one or the other or both should be started depends on the circumstances of each district.

Urban societies.

383. This year an organized effort has been made to extend to artisans, and especially to weavers, the advantages of co-operative methods. Fourteen more societies of this class have been registered during the year and 11 others started which have not yet been registered. The difficulties to be faced, especially in the case of weavers, are much greater than in the case of agriculturists' societies, inasmuch as the weaver is much more down-trodden and consequently more suspicious and less enterprising. The policy adopted has been not to form too many societies, but to make successes of those which have been started.

A credit society has been registered in the 10th Lancer Regiment at Jullundur and a second, not registered till later, in the 7th Hariana Lancers

at Ferozepore. The 10th Lancers' society already has funds amounting to Rs. 12,000. This extension of the movement to the Native Army will be watched with interest.

Rural societies.

384. The great majority of the co-operative societies of the Province, 98 per cent., are still composed of agriculturists: almost entirely confined to the central and west central districts, though a notable advance has been made in Ambála. The number of new societies registered amounts to 647. Objections have been made to the form of society in vogue on the grounds that it contemplates some division of profits, and that in time shares become withdrawable. The prospect of personal profit has, however, been an attractive feature of the banks, and there is little expectation that shares will be withdrawn when the time comes. The possibility of withdrawal has, moreover, brought members to regard their share payments as willing loans rather than as forced contributions. The working capital of the rural societies is now shown to be nearly Rs. 56½ lakhs. The real funds in use, after deducting the amount which appears twice in the form of "loans from other societies," by the rural societies is just under Rs. 50 lakhs. Of this sum the members' shares amount to 29 per cent., their deposits to 21 per cent. and the profit received by them to 6 per cent. That is to say, the contributions by members amount to a total of 56 per cent. of the working capital. But the village societies have also invested and deposited a considerable amount in the Central Banks and Unions, which again is lent out to the village societies and forms part of their funds. So that the total amount contributed by the members of the village societies themselves is not less than 65 per cent. of the whole, leaving only 35 per cent. contributed by people who are not members of any society. Of this 35 per cent., one-half consists of deposits in the village societies, that is to say, money which they have attracted by the credit which they now enjoy. Government loans form only 1½ per cent. of the whole. No one who considers these figures at all carefully can any longer say that the co-operative movement in the Punjab is an artificial creation or regard the future of the movement otherwise than with confidence.

Inspecting staff.

385. The success of the co-operative movement at the present time depends more than anything else on the character of the inspecting staff. The Government paid staff was increased by two Sub-Inspectors during the year, and now consists, in addition to the Registrar, of 8 Inspectors and 5 Sub-Inspectors. The societies themselves are steadily increasing their contribution towards the cost of the movement, and there are now six Sub-Inspectors paid for directly or indirectly by the societies. Another has been secured as the result of a private donation. In addition 24 co-operators are working as Honorary Sub-Inspectors and give useful assistance of a supplemental nature.

Army Remount Department.

Horse-breeding.

386. The latest information available concerning the Army Remount Department is for the year ending 31st March 1911. The figures given include the returns of the Hazara district of the North-West Frontier Province, which is included in the Ráwalpindi Circle. Of 245 stallions employed in the Punjab Circles at the close of the year, 128 were Arabs and 101 in all were at stud in the Jhelum Colony Circle alone. The chief horse-breeding operations of the Province are conducted in this Circle, which comprises the Lower Jhelum Canal Colony in which a majority of the grants allotted are on horse-breeding conditions. The success achieved is shown by the statement that out of 390 country-bred horse stock issued to the service during the year, 270 came from the Jhelum Colony, and in fact only 44 animals of this class issued were purchased in non-Punjab circles.

The district boards in "selected" districts had 161 stallions in employ, of which number 146 were Arabs. It is the function of the operations conducted by the district boards to build up the foundation upon which thorough bred blood can produce horses of the class required for remounts.

Mule-breeding.

387. The fact that mule-breeding is highly remunerative has not escaped the notice of the Punjabi, and considerable attention is now paid to this source of profit. In addition to the private demand, Government requires mules for Ordnance, Army Transport, and equipment purposes, and for Ordnance mules high prices are given. Mule-breeding is most popular in the Ráwalpindi Circle, but considerable success has been attained in the Chenab Colony, where extra land is given to village headmen on mule-breeding conditions. Out of 302 Government donkey stallions employed in 1910-11, 109 were in the Ráwalpindi Circle, the principal breeds being American, Cyprian or country-bred. There are practically no district board donkey stallions in "selected" districts. A total of 1,159 young mules were purchased (mainly in the Punjab), at an average cost of Rs. 89, for stocking the rearing depôts and eventual issue to the service.

Horse fairs and shows.

388. Eleven horse fairs were held in "selected" districts of the Punjab in 1910-11, *viz.*, at Ráwalpindi, Gujrát, Shahpur, Amritsar (2), Jalálabad (Ferozepore), Dera Gházi Khan, Multán, Lyallpur, Háfizabad (Gujránwála) and Jhang. A fair was also held at Haripur in Hazára district. The Sargodha (Shahpur) fair had to be abandoned owing to heavy rain. Prizes to the amount of Rs. 18,878 were awarded at these fairs; the Imperial allotment being Rs. 14,750. The balance was contributed by Provincial funds. Twenty medals also were given. At these fairs 485 remounts were purchased for Government, principally for Indian Cavalry, and 827 mules. In addition 2,139 mules were purchased by private persons. The purchases of mules were almost entirely at the fairs of the Ráwalpindi and Lahore Circles.

Veterinary and Live-stock.

Civil Veterinary Department.

389. The number of veterinary hospitals open at the close of 1911-12 was 109 at which during the year 241,291 cases were treated. Satisfactory progress has been made in the provision of suitable accommodation. Each district has now been provided with a touring veterinary assistant and each tahsil with a stationary veterinary assistant and with a hospital—though in many cases the hospital buildings are still but temporary—and there is one inspector for every two districts. The original scheme of development has accordingly now been worked up to. Since provincialisation in 1901 the record of the department has been one of rapid expansion and progress in every direction. The Punjab Civil Veterinary Department is the pioneer veterinary department in India, and the high state of efficiency that has been reached has been due to the energies of Major Walker who now severs his connection with the department which he organised.

A fresh phase now lies before the department. The questions under consideration are whether there should be two veterinary assistants for each tahsil and a veterinary inspector for each district; whether the work of the European Superintendents can be lightened and the first step taken to opening a career for native veterinary surgeons by the creation of a grade of Deputy Superintendent; and whether veterinary assistants can be placed under the control of the local bodies who pay for them. All this means extra expenditure and at the same time the need of more good bulls for breeding in almost all districts is pressing and must absorb much of the money available for the use of the department.

Contagious disease.

390. During the year 25,455 deaths were reported against 74,696 in the previous year. This satisfactory diminution may be ascribed in the main to an abnormally healthy year. There is strong evidence that the work of the department is becoming recognised by the people and frequent applications for assistance are received. There is less concealment of disease on the part of cattle owners. The monthly reports of the patwaris, though frequently submitted in very dilatory fashion, may be regarded as fairly accurate. There is considerable room for improvement in the prompt reporting of actual outbreaks by patwaris, however. Delay and remissness in this respect may be the cause of unnecessary mortality.

Bovines.

391. The deaths from rinderpest (9,317) were a satisfactory decrease from the appalling figures of the previous year. Inoculations were performed in 32,096 cases. The general success of rinderpest inoculation is now accepted. Since January 1st, 1912, owners of animals inoculated against rinderpest are required to pay at the rate of three annas per head (six annas in the hill tahsils). The veterinary assistant who does the work has to collect the money and credit it into the treasury. District boards may, if they wish, remit the fees on inoculations and credit Government annually with the amount which would have been realised had fees been imposed. So far the district boards of Siálkot, Gurdáspur and Shahpur have decided to remit the fees. Hæmorrhagic septicæmia caused 10,894 deaths and was reported from all districts except Hissar. Vaccination against this disease is still largely experimental and was only carried out in six districts.

Equines.

392. Complete figures for equine mortality in the Province are not available as the Civil Veterinary Department only reports for non-selected districts. A serious outbreak of glanders occurred among the tonga ponies of the Dalhousie and Kángra lines, and the energetic measures taken resulted in the destruction of 25 animals, compensation being given. The scantiness of the rainfall resulted in greatly reduced mortality from *surra*. Detailed instructions for the treatment of the disease have lately been issued.

Horse-breeding and horse shows.

393. The number of horse and pony stallions at stud in non selected districts was 66, and there were in addition 72 donkey stallions. Coverings averaged 57 for horse, 58 for pony and 48 for donkey stallions, which is regarded as satisfactory. Accurate figures of produce are difficult to obtain, and none are given by the Civil Veterinary Department.

Eight horse shows were held under the auspices of the department with a total attendance of 4,912. Rupees 2,631 were distributed in prize money, provided one-third from imperial and two-thirds from local funds, and 3 medals were distributed. Altogether 520 animals appear to have changed hands, chiefly at Siálkot.

Cattle-breeding.

394. Most valuable information has been collected in Mr. Stow's Report on Cattle and Dairy Farming in the Punjab, and the importance of the subject is recognised. The improvement of the Hissar breed is provided for by the Hissar Cattle Farm, and a stud-grant at Kaliána in the Montgomery district will benefit the Montgomery strain. But for the Dhanni and Hariána cattle nothing has yet been done to preserve and extend these important breeds.

Improvement of wool.

395. Efforts in the direction of the improvement of wool in Kángra and Kulu by the importation of merino rams have met with some success, but the mortality among the imported animals has been serious. The importation of more rams and some ewes has been agreed to.

Cattle fairs.

396. Thirty-four cattle fairs were held in 20 districts. Some Rs. 13,000 provided from local funds were distributed in prizes and 9 medals were awarded. The importance of these fairs as markets cannot be over-estimated, but it is doubtful if they are successful as shows, and whether the prize money could not more profitably be spent in other ways. Judging by the amount of fees realised, the Amritsar and Rohtak shows are the most popular, but over Rs. 33,000 were realised at the five shows held in Hissar. The total amount realised in fees was Rs. 1,58,633.

Government Cattle Farm, Hissar.

General.

397. Owing to the shortage of rain and the failure of the hay and barani crop, reliance had to be placed on the cultivated fodder crop, from which the stock is now almost solely fed. The result of the cultivation of the irrigated land was very successful, but difficulties are continually arising over the canal water-supply, as the farm only receives tail irrigation. Owing to the prevailing scarcity labour was cheap, and the opportunity was taken to introduce improvements on the farm. An increase in the wages of the menials will, however, sooner or later have to be faced.

Cattle-breeding.

398. The breed of cattle has immensely improved, now that a fixed type is being produced. The type is much appreciated by those who take stud bulls from the farm. The number of cows was 1,253 and they form a very fine herd. During the year 739 calves were born. Disease has given a good deal of trouble, but there has not been any abnormal mortality.

Seventy-two bulls were issued to Punjab district boards at the low price of Rs. 200 apiece, 28 to the Civil Veterinary Department of the United Provinces and two were sold to breeders. One hundred and fifty siege train bullocks were supplied to the Military at Rs. 150 each and 11 bullocks to jails at Rs. 175.

Mule and donkey-breeding.

399. There were 59 pony mares and 94 donkey mares kept for mule and donkey-breeding with 5 jacks. The sanctioned strength of 100 mares in each case will probably be completed this year. During the year 22 mules were born and 60 were purchased. The number of mules supplied to the Military was 32. Donkey-breeding has been recently started to supply jacks required by Government and the district boards. Seventy-five mares foaled during the year. The number of donkey colts on the farm was 70. Eight jacks were issued, of which 7 went to the Civil Veterinary Department, Punjab. The price allowed is only Rs. 400 apiece.

Sheep-breeding.

400. There were 347 ewes present at the end of the year, divided up into flocks of country-breds, half-bred merinos and pure-bred merinos. Merino rams are now placed with each flock, as it was found that the lambs of the half-bred flock by a half-bred ram had strongly marked country wool. The pure-bred imported merino ewes and rams do not do well as they suffer terribly in the heat. The number of lambs born was 417, of which 17 were merino. Forty-eight ewes, 1 ram, 3 female lambs and 131 male lambs were sold during the year. The sheep-breeding operations have the object of breeding rams for issue to sheep-breeding districts, principally to improve the wool of the country sheep. In the opinion of experts the use of the half-bred rams raised on the farm will do much to improve the fleeces of the country sheep.

Financial.

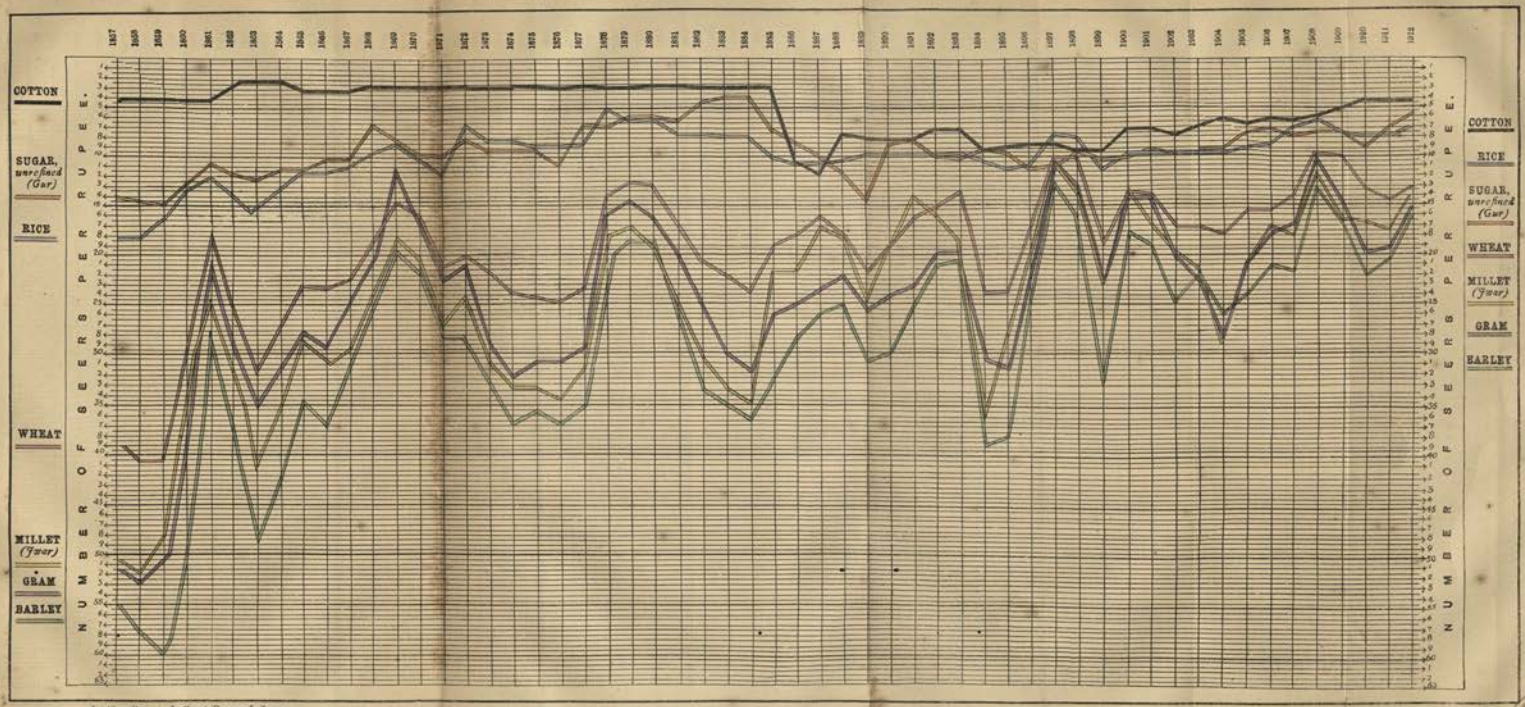
401. The farm was made over to the Punjab Government on April 1st 1912. The receipts for the year aggregated Rs. 85,541 and the expenditure Rs. 1,06,266. The small loss on the working is more than compensated for by the improvement in the cattle of the Province brought about by the bulls issued to districts from the farm. It is only fair too to point out that much of the stock issued to Government departments and district boards is sold at less than the market value. This is particularly true of the siege train bullocks issued to the Military Department. This class of bullock gets more expensive every year. The valuation of the 4,710 animals on the farm on March 31st, 1912, is taken at Rs. 3,09,039.

28.—Weather and Crops.

Weather.

402. April and May were (fortunately as the event shewed) so dry as seriously to contract kharif sowings. The monsoon reached the Punjab on June 13th, and gave general rain for five days. But the current died away completely till the third week in August. And the prolonged drought in the hottest part of the year produced a heavy percentage of failure on the small area sown. In July and August the Province received only 34 per cent. of its normal rainfall. The rainfall statistics, however, do not adequately express the prolongation of the drought or the damage inflicted. It was a bad summer, particularly hard on overworked and underfed well cattle. Fitful and local rain in August and September marked the tardy re-establishment of the monsoon current, revived the remnants of the barani crop, and in some cases produced remarkable results with late sowings. The monsoon disappeared by the end of September after a cyclonic storm which brought some measure of relief to the Delhi division. Not only were the rains 40 per cent. in defect, but on the whole singularly ill-timed. They were followed by a phenomenal disturbance which produced most welcome autumn rains on October 26th, and which continued for some four weeks. This rain was responsible for very extended sowings. An abnormally wet January was unfortunately followed by a dry

DIAGRAM SHOWING THE RISE AND FALL IN PRICES OF PRINCIPAL ARTICLES OF AGRICULTURAL PRODUCE IN THE PUNJAB, FROM 1857 TO 1912.



Litho-Punjab Govt. Press Lahore.

Price of cotton (desi) given to 1865 and of cotton (sankarah) from 1866 onwards as price of former is not available.

From the year 1896 onwards the prices are those of Amritsar, the principal grain mart of the Province.

February and March when the grain should have been swelling. But showers in April and May saved the situation. Cotton and sugarcane were damaged considerably by insect pests which of course flourished during the drought.

Area in acres—Sown 7,439,294; failed 2,273,031, matured 5,166,263; percentage of failed on sown 31. **Kharif crop, 1911.**

403. The sown area was only 64 per cent. of the normal, and of this no less than 31 per cent. failed. The district areas varied chiefly with the irrigational protection available, the worst being Hissar with 43 per cent. of normal sowings and 76 per cent. of failure. Rohtak returned 32 per cent. and 47 per cent., and Karnál 42 per cent. and 26 per cent. In the hill and submontane districts of Simla, Kángra and Hoshiárpur alone were fair crops harvested from unirrigated land.

Area in acres—Sown 18,869,148; failed 2,549,266; matured 16,319,882; percentage of failed on sown 14. **Rabi crop, 1912.**

404. The rains in September, October and November completely changed the picture. A very large area normally under autumn crops was available for sowing and many fields of standing crops had been grazed off. The fullest advantage was taken of the opportunity, and the results were a sown area 13 per cent. above normal and almost universal expectations of a record harvest. Untimely drought in February and March dashed these hopes to some extent in most of the Province. But even so Delhi and Ráwalpindi gathered the largest spring crop recorded; that of Gurgaon was 63 per cent. above the normal; while Rohtak reported a harvest 2¼ times better than the average. The net result for the Province was a good 18-anna crop.

405. The area and outturns of the chief kharif staples were all well below normal. The calculated outturns are in tons—rice 227,445, jowar 67,674, bajra 97,396, maize 366,455. Alone of the above, maize was able to make a great recovery on the late rainfall and indeed the rice estimate errs probably in the direction of excess. Sugarcane was poor everywhere: it was damaged by drought and by insect pests and many fields were cut for fodder in the winter. The outturn of cotton from British districts is returned at 206,507 bales and was much under normal. The unirrigated crop was poor everywhere, while boll-worm in the first part of the summer and cold in November and December damaged irrigated plants. **Crops.**

The wheat area was the largest recorded since 1907. The weight is estimated at 3,387,085 tons, an outturn of 12·6 bushels per acre. Barley shows a large increase on previous figures, the yield being estimated at 381,711 tons. The increased area is attributed to the demands of breweries in Europe. Gram with 1,126,216 tons and rabi oilseeds (rape and toria) with 199,964 tons were well up to or above normal.

406. The total irrigated area was 11,316,611 acres as against 10,357,306 of the previous year. Wells are responsible for one-third and Government canals for two-thirds of the total, as the areas irrigated by tanks, private canals and other sources are negligeable. The drought of course placed a great strain on all sources of irrigation, and this was on the whole well met by the Government canals. They must at least have saved the lives of many thousands of cattle, for water was given freely to fodder crops. The inundation canals in Shahpur are reported to have failed, and there was a similar failure of the Ravi inundation canals in Montgomery. But in a year like 1911 the phenomenon of shortage at the tail of irrigation works and on all inundation canals fed by rivers which are harnessed upstream of them is really only quite normal. The masonry wells in use increased by 2,713 and non-masonry wells by 640. **Irrigated area.**

407. In spite of the heavy crop, a brisk demand for export wheat kept the harvest prices high and in fact, in practically all districts, the quotations are higher than in the previous year. Stocks are everywhere sufficient, but even in August owners were said to be holding up grain for a further rise in price which weather conditions in Europe were thought likely to bring about. The harvest prices of wheat per maund of 82⅔ lbs. at the principal centres were— **Prices.**

Delhi Rs. 3-5-0, Ferozepore Rs. 3-1-0, Lahore Rs. 3, Amritsar Rs. 2-13-0 and Lyallpur Rs. 2-14-0. With the exception of cotton the harvest prices of the other principal crops remained at a similarly high level, toria selling at Lyallpur at the remunerative price of Rs. 4-8-0 a maund. Cotton, however, did not maintain the record price of the previous year, though the rates quoted are well above normal. The harvest rates per maund for unginned cotton were Delhi Rs. 9, Ferozepore Rs. 7-4-0, Lahore Rs. 7-8-0, Amritsar Rs. 7-10-0, and Lyallpur Rs. 8-4-0.

29.—Horticulture.

Agri-Horticultural Gardens, Lahore.

403. Classes for the training of gardeners and boys were started in 1910 and are proving successful, as the demand for good gardeners is on the increase. The courses, which are chiefly of a practical nature, were attended by 25 students in 1911-12. The success obtained by the eucalyptus in the gardens, five varieties of which now existing were planted as far back as 1861, has led to extensive trials of other varieties, and at present 108 out of the 140 varieties known have been planted. The total expenditure in 1911-12 amounted to Rs. 34,525 and was met by sales of garden produce, amounting to Rs. 20,740, and by contributions from Local Bodies, Rs. 2,542, the balance being met from the annual grant from Government amounting to Rs. 13,000. The Superintendent was in charge of the garden portion of the Punjab Government Camp at the Coronation Durbar.

Other gardens.

409. The Shalimar and Shahdara gardens at Lahore also are under the supervision of a European gardener and the steady improvement of the condition of these gardens continues.

At Delhi the European gardener is in charge of the old established gardens at the tombs of Humayun, Safdar Jang and Ise Khan, and special efforts were made, with success, to have these gardens in good order, in spite of the drought of the early and middle summer, on the occasion of the Coronation Durbar. A garden of 8½ acres was laid out at the site of the King Edward VII Memorial Statue. An interesting experiment was made at this garden. In order to ensure a green surface at the time of the stone laying ceremony methi (trigonella) seed was sown when the grass was planted. The methi sprang up in about a month and maintained a green surface throughout the cold weather, which could be smoothly mown and did not interfere with the growth of the grass. The ground was allowed to get dry at the beginning of the hot weather and within a week the methi had died out leaving good lawns in its place. The methi, belonging to the order of "Leguminosæ," acts as a manure and leaves the soil richer in available nitrogenous matter. The Rang Mahal, Mumtaz Mahal and Diwan-i-Am sections of the Palace Garden at the Fort were laid out during the year and, in spite of unexpected difficulties encountered in the excavation of foundations of ancient buildings, were ready for the Coronation Durbar. Considerable trouble was given by the electric pumping apparatus which became practically useless.

Fruit culture.

410. Government orchards are maintained at Mahasu and Summer Hill under the immediate supervision of the Simla municipal committee. These orchards, in addition to producing fruit for the market, are nurseries of fruit trees suitable for the hills, for which there is a constant demand. The Mahasu orchards are in the catchment area of the Simla water-supply and the question of their abolition is under consideration as they involve some contamination of the water-supply of Simla.

Three new orchards were established by the Forest Department during the year in the Kulu division, at a cost of Rs. 390, and wild apple and pear stocks have been planted out. It is satisfactory to find that the suspicion which had arisen in the minds of the local villagers that Government intended putting a heavy revenue on fruit trees once they were established has died down, and the people are now anxious to get their wild trees grafted by our malis and are planting wild stocks.

411. A further sum of Rs. 10,000 has been provided in the Forest Department during the financial year 1912-13 for the cultivation of European olives. The work is being supervised by Mr. Mitchell, and promises to be very successful. The Local Government has sanctioned the Ghandala Reserve being kept for olive cultivation instead of being included in the forests in which browsing is to be provided for the Silladar Camel Corps. Olive culture.

30.—Forests.

Forest Department.

412. From the 1st April 1912, the Hazara division was removed from the control of the Conservator of Forests, Punjab, and with the division its establishment of 7 Forest Rangers, 5 Deputy Rangers, 23 Foresters, 126 Forest Guards and 4 clerks. Separation of Hazara division from the Punjab.

413. The area under the control of the Forest Department in the Punjab was reduced during the year by 6,912 acres and now stands at 8,723·13 square miles. The chief items of reduction were 2,494 acres of Protected Forests in the Multan division and 3,432 acres of Unclassed Forests in the Lahore, Montgomery and Shahpur divisions, handed over to the Irrigation Department, and 725 acres of Undemarcated Leased Forests in the Bashahr division given up for cultivation. Alteration in area.

414. Dera Chahl and Sultanke forests in the Lahore division, with areas of 700 and 455 acres, respectively, were notified as Reserved Forests under section 19 of the Indian Forest Act. The settlement is still pending of the Terah, Baoli Lehna Singh, Mahandevi and Chhaoni forests in the same division, with an aggregate area of 31,231 acres, and of a triangular block of 20,000 acres for one of the new irrigated plantations near Khánewal in the Multán division. Orders have been received sanctioning the revision of the Mr. Minniken's Settlement Report of the Sutlej Valley Forests in Bashahr and this will now be undertaken by the present Divisional Officer. Forest settlements.

The preparation of a record for certain jagir forests in Kángra is proceeding under the Settlement Officer. The suitability of the present system of forest conservancy in Kángra has been questioned by the Forest Department, in consequence of the opinion expressed by the Conservator that protected forests in Kángra, both demarcated and undemarcated (outside the Kulu subdivision), are suffering a rapid deterioration. The cause Mr. Fisher considered to be excessive grazing, and the remedy which he suggested was an amendment of section 29 (*b*) of the Forest Act. An alternative is a special forest regulation for Kángra as was suggested by Sir James Lyall 20 years ago. Sir James Douie has indicated the main lines of enquiry in connection with the question of the existence of serious deterioration and of its cause and cure, if it is found to exist, in a note, which is under consideration by the local officers.

415. The proposed general substitution of the group for the selection method in the hill forest working plans has been postponed pending further experience. Working plans.

The working plan for the Upper Ravi forests has been formally sanctioned during the year. The plans for the Murree Cantonment forests, Dalhousie Municipal forests and Dagshai and Balun Cantonment forests have been accepted by the authorities concerned and have been brought into force. The working plan for the Subathu Cantonment forests has not yet been accepted by the Military authorities. Mr. McCrie, Deputy Conservator of Forests, with a party of 3rd year students from the Imperial Forest College, Dehra Dun, visited Dharmsála and collected data for a working plan for some 12 square miles of municipal forests. Considerable progress has been made with the working plan of the Pabar forests which is now being written by Mr Gibson.

The preparation of working plans for the Salt Range forests cannot be proceeded with until final orders are received on the recommendations of the Camel-Browsing Committee referred to in paragraph 424.

Forest offences.

416. The total number of forest offences reported, 9,250, shows a serious increase of 17 per cent. on the already high figures of the previous year. The increase is attributed to the general scarcity of fodder consequent on the failure of the monsoon. The discovery of illicit cultivation of forest land in Kulu, in the course of settlement operations, increased the number of cases taken into Court. Cases compounded under section 67 of the Forest Act, 8,071 in number, were swollen chiefly by illicit grazing in the Ráwalpindi and Jhelum divisions. The average compensation per case was Rs. 4-1-6 and per head Rs. 2-14-5.

Protection from fire and cattle.

417. The total number of fires was 288, burning 20,447 acres. The general dryness of the year was favourable to forest fires, but incendiarism continued in the Ráwalpindi division and punitive measures are urgently required.

In almost all divisions forests were thrown open to grazing to meet the scarcity of fodder and the area closed to all animals fell from 553 square miles to 174 square miles. The area entirely or partially closed amounted to 16·55 per cent. of the State forests, a reduction on previous figures.

Reproduction, natural and artificial.

418. The year has been a bad one for natural reproduction, though coppice reproduction has been satisfactory. Progress was made with plantation at Kot Lakhpat (Lahore), but little or nothing has been done towards the reboisement of the Pabbi hills. More thinning work has been possible, as a large number of trained men were available.

Experiments.

419. Encouraging results have been obtained from the eucalyptus experiments: the most extensive of which have been made in the Simla division and others at Dharmsála, Changa Manga and Kot Lakhpat. The resin-tapping experiment proves an extraordinary increase in the yield of trees "tapped to death" and indicates the advisability of so tapping all trees marked for felling. Observations to ascertain the most economical freshening period are being carried on, but conclusive results have not yet been obtained.

Outturn.

420. The total outturn of timber during the year was 4,108,232 cubic feet as against 4,811,411 cubic feet in 1910-11, a decrease of 703,179 cubic feet, mainly due to alteration in system in the Bashahr division. The total outturn of firewood was 16,404,152 cubic feet solid as compared with 24,895,487 cubic feet solid extracted in 1910-11, a decrease of 8,491,335 cubic feet solid. Of the total outturn of timber, 9·71 per cent. came from Reserved Forests, 55·08 per cent. from Protected Forests, 2·68 per cent. from Unclassed Forests and 32·53 per cent. from Leased Forests. Of the firewood, 29·37 per cent. came from Reserved Forests, 48·73 per cent. from Protected Forests, 7·65 per cent. from Unclassed Forests and 14·25 from Leased Forests. The total value of minor produce rose from Rs. 17,00,442 to Rs. 23,45,242. Of the total, 12·00 per cent. came from Reserved Forests, 50·91 per cent. from Protected Forests, 2·18 per cent. from Unclassed Forests and 34·91 per cent. from Leased Forests.

The amount of timber removed under rights, privileges or free-grants was 1,283,441 cubic feet as compared with 902,721 cubic feet in 1910-11, while the firewood removed in these two years was 12,642,731 cubic feet and 19,462,415, respectively. The percentage of the total outturn was 31·24 for timber and 77·07 for firewood. The increase in the removals of timber by right-holders occurred in the Bashahr division, and is due to the grant of trees at the annual distribution in Pandrabis, Nogli, Taranda and Chini Ranges, where distributions were not made last year. The decrease in firewood occurred in the Kulu division in consequence of the recalculation of the produce removed by right-holders. The value of the minor produce taken was Rs. 20,32,310 against Rs. 14,67,351 in the previous year; this increase is also in the Kulu division and also due to the recalculation of produce removed by right-holders.

Resin.

421. The resin factory at Shahdara has been worked almost continuously from the end of January to the close of the year. In April day and night working was introduced, but in May, June and July owing to the excessive

heat it was found necessary to close down between 9 A.M. and 5 P.M. As a result of the experience gained it appears that the maximum quantity of crude resin, which can be dealt with by the present plant, is some 13,000 maunds annually, so that a larger plant will be necessary if the industry is to be developed to its full extent. Proposals for the purchase of a larger plant have been accepted by the Local Government, and Mr. Gibson, Deputy Conservator of Forests, is now investigating certain details in connection with the new plant while on leave in Europe.

Foreign imports.

422. The total imports of foreign timber show an increase of 2,308,090 cubic feet over the imports of 1910-11, rising to 7,810,078 cubic feet as compared with an average of 5,217,844 cubic feet during the three preceding years. The Indus and Jhelum rivers show an increase of 320,931 cubic feet in deodar and pine logs. The Jhelum and Chenab show an increase of 2,031,843 cubic feet in deodar sleepers. Other sleepers also show an increase of 301,546 cubic feet, while other scantlings show a decrease of 168,753 cubic feet.

Rawalpindi rules.

423. A favourable account is given of the working of the rules regarding Government trees growing on private or common lands in the hill tahsils of Ráwalpindi district which were sanctioned by the Punjab Government in March 1909. Two retired Subedars and one Jamadar and a pensioned Inspector of Police have been associated in the management and protection of these trees, and it is satisfactory to learn that they have administered their charges with success and have secured the confidence of both the officials and the people.

Browsing of camel corps.

424. A committee consisting of the Financial Commissioner, the Director-General of Supply and Transport and the Conservator of Forests considered the arrangements required to meet the browsing requirements of the 8 Silladar Camel Corps located in the Punjab. It was found that ample browsing could be provided in the Punjab and North-West Frontier Province, and a complete scheme was drawn up and has been submitted to the Government of India.

Arboriculture.

General progress.

425. No report on arboriculture was due in 1911-12 as under orders issued in 1910 a triennial report only is required. The last report was for the triennium 1908-09 to 1910-11, and was incorporated in last year's administration report. In the Government review which subsequently issued the improvement in tree growth in the Province during the last 35 years is acknowledged, but the absence of systematic working in many districts, in spite of the proved profitableness of the enterprise, is deplored : and the responsibility of Commissioners in the matter is once more affirmed. The subject is further referred to in section 24 under District and Local Boards.

31.—Mines and Quarries.

Indian Mines Act.

426. The report of the Chief Inspector of Mines in India deals only with mines coming within the scope of Act VIII of 1901, and does not include quarries which are under 20 feet deep. There are 10 coal mines in the Punjab, 8 in Jhelum (output 26,982 tons) and 1 each in Shahpur and Mianwali with outputs of 1,071 and 2,522 tons respectively. One mine only (in Jhelum) is worked by mechanical power. The daily average number of persons employed was 1,505 ; 936 below and 569 above ground : 5 women and 12 children were employed above ground. The output per person employed below ground is 32 tons and above and below ground 20. Four fatal and 3 serious accidents are reported from the Jhelum mines involving six deaths : one fatal case, however, appears to have occurred at Abbottabad. None of the accidents present any special features. Limestone is worked in a mine in Hoshiárpur employing 40 men below and 50 above ground, with an output of 250 tons. Four Government salt mines in Shahpur, Jhelum and Miánwáli are under the Act. Below ground 857 persons are employed including 349 women and 54 children, and 33 above. The total output was 124,603 tons. One fatal and 13 serious accidents occurred in these mines. Five slate mines are worked in Kángra and 3 in Gurgaon with

outputs of 4,112 and 2,009 tons respectively. The industry employs a daily average of 183 below and 418 above ground. Twenty-nine children are employed below and 63 women and 67 children above ground at these mines.

Output of minerals.

427. In the returns of production minerals are divided into class I, for which approximately trustworthy annual returns are available, and class II, for which full particulars cannot be procured. Under class I 30,575 tons of coal were extracted, the details of which have been given in the last paragraph. The very considerable decrease of 18,000 tons is due to the final abandonment by the North-Western Railway of their Dandot colliery in June 1911. The colliery is now being worked by an Indian firm who find a ready sale for their coal to brick and lime burners. The average price per ton of Punjab coal was Rs. 5-4-1. Gold was produced to the extent of 134·62 ounces, valued at Rs. 7,770. The industry gave employment to a daily average of 245 persons. The production of petroleum amounted to 1,400 gallons. The output of rock salt includes 124,603 tons raised in the Salt Range and 3,996 tons in Mandi State. In addition some 1,200 tons of salt were produced by evaporation from well brine. Information as to the salt industry is given in Chapter V. The outturn of saltpetre was 2,845 tons, valued at Rs. 7,73,835. Under class II the output of alum in Mianwáli was 6,160 cwt., valued at Rs. 41,880. The returns for building materials and road metal are too incomplete to be of real value, but they represent an important item in the industries of the Province. Limestone and kankar give 8,009 tons, valued at Rs. 5,445 ; slates 6,121 tons, valued at Rs. 96,345 ; and miscellaneous 4,704 tons, valued at Rs. 1,095. Gypsum was extracted in the Salt Range to the extent of 1,469 tons, and in the Delhi district there was a large increase from 450 tons to 3,260.

Mineral concessions.

428. One coal mining lease for 20 years was granted in respect of 146 acres in the Jhelum district, and in the same district two prospecting licenses were renewed and one fresh license was granted, the minerals sought in each case being coal.

32.—Manufactures.

General.

General.

429. Monographs dealing with the principal industries of the Province have been compiled at various dates since 1884.* More recently a complete industrial survey of the Province has been carried out for Government by Mr. A. Latifi, I.C.S., and the results with comments and suggestions were published in 1911.† A vast amount of information has been collected during this survey and now made public. The scarcity of labour, skilled and unskilled, the immobility of capital and the absence of any proper organisation for the distribution of commodities among consumers find a prominent place in Mr. Latifi's comments.

Salvation Army efforts.

430. Considerable enterprise is being shewn by the Salvation Army in the development of the cottage industries of the Province. The Sir Louis Dane Weaving School for the Punjab is established in the fort at Ludhiána and weavers visit the school from all parts of India. Improved handlooms have been supplied in considerable numbers. Small branch weaveries have also been established at Lahore, Cháwa (Ludhiána), Kot Mokhal (Siálkot), Ani

*The list of these publications is as follows :—

	Monograph.	*Year of publication.*		*Monograph.*	*Year of publication.*
1.	Cotton Manufactures ...	... 1884	9.	Pottery and Glass Industries	... 1892
2.	Woollen Manufactures ...	... 1885	10.	Leather Industry ...	... 1893
3.	Silk Industry	... 1887	11.	Ivory Carving ...	... 1900
4.	Do. do. (revised) ...	... 1899	12.	Stone Carving and In-laying	... 1906
5.	Brass and Copper ...	... 1888	13.	Carpet-making ...	... 1907
6.	Wood Manufactures ...	... 1889	14.	Iron and Steel Industry ...	.. 1908
7.	Gold and Silver Work ...	... 1890	15.	Paper making and papier mache	... 1908
8.	Fibrous Manufactures ...	... 1891	16.	Wire and Tinsel Industry ...	... 1909

†The Industrial Punjab by A. Latifi, I.C.S., published by Longmans, Green & Co., 1911.

(Kulu) and Chini (Bashahr State). A silk department is now being added to the Ludhiána School, for instruction in reeling and spinning silk. Reeling centres are also being opened at Lahore and other places.

Factory Act.

Factories and employees.

431. The total number of factories dealt with under Act XV of 1881 is 268, of which no less than 202 are cotton-ginning, cleaning and pressing factories (an increase of 11 since the previous year). Lahore, Multán and Lyallpur have 36, 30, and 28 such factories, respectively. Sixty-three factories, however, remained closed during the year, and of these 59 were ginning factories which were affected by the shortage of cotton. The number of accidents reported is 258, of which, however, only 46 were serious and 8 fatal. The average number of operatives employed fell by 1,442 to 28,184 which includes 3,456 women and 694 children. The decrease, which is most noticeable in the Delhi, Hissar and Ráwalpindi districts, was due to the closing of so many ginning mills and, in Delhi, to the high prices paid for labour in connection with the Coronation Durbar, which drew many of the labourers away from the factories. The difficulty of obtaining labour has affected the working of the Delhi weaving and spinning mills.

Inspections.

432. Out of 205 working factories, 155 were inspected once or more, while 50 were not inspected at all. The falling-off in the number of inspections is presumably due to the remarks, reproduced in the recent reports, of the Factory Commission as to the uselessness of inspections by District Magistrates and Civil Surgeons. The impending appointment of a whole-time Factory and Boiler Inspector under the new Act will ensure regular inspection of every factory.

The mid-day stoppage under section 5-A of the Act is reported to be generally observed, but it is doubtful if the rule is observed to the extent reported. The percentage of working factories, which are returned as observing a Sunday holiday, continues to increase, being 73 as compared with 70 in 1910, and most Deputy Commissioners report that the Sunday holiday is observed, but in 7 out of 41 factories inspected by the Director of Land Records or his Personal Assistants it was found that there was no Sunday holiday, and in some of these cases there was no weekly holiday either.

The sanitary arrangements are generally reported satisfactory, but in the provision of pure air, clean water and an efficient conservancy the factories stand in need of great improvement. In spite, however, of sanitary defects the general health of the operatives is good.

The provisions of the Act as to the employment of women are rarely observed, and the overtime working of women is fairly general. Children under 14 are also commonly worked as whole timers.

There was, however, only one prosecution during the year, and it is explained that in view of the introduction of a new Act it was not thought advisable to institute many prosecutions under the old Act.

Wages.

433. There was no marked increase of wages except at Delhi, where the Coronation Durbar sent up the price of labour. In Lyallpur and Lahore wages fell owing to the poor kharif and the consequent slack demand for agricultural labour. Wages remain in excess of what is generally paid to agricultural labourers.

New Act.

434. Provisional rules under the new Act (XII of 1911) have been drawn up and were published in the Gazette on March 29th, 1912. The report for the year 1911 is accordingly the last which will be submitted under the old Act.

33.—Trade.

INTERNAL RAIL AND RIVER-BORNE TRADE.

Volume of trade.

435. The imports have increased both in volume and value Rs. 338 lakhs) and are the largest hitherto recorded. The exports have also increased, and are only Rs. 93 lakhs short of the great wheat year of 1907-08.

The following table expresses the total rail and river-borne trade of the past three years, exclusive of animals and treasure :—

Years.	Imports.		Exports.	
	Maunds.	Value in rupees.	Maunds.	Value in rupees.
1909-10	39,743,586	25,01,28,904	45,501,556	25,17,11,928
1910-11	42,340,721	26,62,99,310	50,299,736	25,43,82,426
1911-12	55,731,214	30,01,28,820	58,815,182	27,63,21,458

Imports.

436. Imported commodities contributing more than 1 per cent. of this total value are :—

Article.	Per cent.	Value in rupees, lakhs.	Article.	Per cent.	Value in rupees, lakhs.
Apparel ...	3	94	Oils ...	2	56
Coal and coke ...	2	64	Oil-seeds ...	2	54
Cotton ...	33½	10,09½	Provisions (ghi) ...	3	96½
Drugs ...	2	63	Railway plant ...	3	89.
Dyes and tans ...	1½	47	Spices ...	1	38½
Grain and pulse ...	3	98	Sugar ...	12	370
Hides ...	1	38	Tobacco ...	1	22
Jute ...	3½	1,06½	Wood ...	3	89½
Metals ...	11	328½	Wool ...	2½	78½

Among cotton goods foreign piece-goods furnish 22 per cent. of the total imports : Indian piece-goods 8½ per cent. and Indian twist and yarn 1½ per cent. Among metals hardware and cutlery are responsible for 4½ per cent., wrought iron and steel bars, etc., 3 per cent. and machinery 1 per cent. Rice is the chief grain imported, and refined and unrefined sugar approximately halve the sugar imports.

Increases.—Coal and coke have risen by Rs. 13½ lakhs, Indian twist and yarn Rs. 17 lakhs, foreign piece-goods Rs. 85 lakhs, gram and pulse Rs. 12½ lakhs, " other " iron manufactures Rs. 39 lakhs, railway plant and rolling stock Rs. 48 lakhs, raw sugar Rs. 31 lakhs, unrefined sugar Rs. 58½ lakhs and rough timber Rs. 24 lakhs.

A light cotton crop produced a heavy demand for twist and yarn in the mills, which was supplied chiefly from Madras and Karachi. Even so no less than 59 out of 202 ginning factories were closed down in the Punjab. The failure of the sugarcane threw the province back chiefly on the United Provinces for its gur.

Decreases.—The chief decreases are raw cotton Rs. 53½ lakhs and refined sugar Rs 35½ lakhs. A decrease of Rs. 68 lakhs in "other oil seeds" is partly due to the newly adopted separate classification of cotton seed, hitherto returned under this head, which accounted for Rs. 30 lakhs last year. The cotton figures reflect general shortage and high prices in the Indian continent, and a fine rice crop in 1910 naturally reduced imports. High duties are apparently gradually reducing the consumption of the better grade foreign liquors, for the people who drink these are the very classes who do not share in the general prosperity of the province. On the other hand, they tend to substitute comparatively pure indigenous spirit for the cheaper grades of imported liquor.

437. The more important exports show the following percentages of the total :— **Exports.**

Article.	Per cent.	Value in rupees, lakhs.	Article.	Per cent.	Value in rupees, lakhs.
Apparel ...	2½	75½	Oil-seeds ...	10	2,63½
Cotton ...	15	4,05	Provisions ...	1	28
Grain and pulse ...	53½	14,48	Railway plant ...	1	34½
Hides ...	5	1,26½	Salt ...	1	22½
Metals ...	2	58	Wool ...	3	73

Half the grain exported is wheat, the other half being very largely grain and pulse. Practically the whole of the oil-seeds are classified as rape and mustard, linseed and til being very unimportant exports.

Increases.—The chief increases in exports have been gram and pulse Rs. 335 lakhs, other grains Rs. 113 lakhs, hides and skins Rs. 21½ lakhs Probably the gram figures indicate efforts to dispose of surplus stocks after two successive bumper gram harvests. The most interesting figure is that for barley which is responsible for the increase in "other grains."

The separate shipment of Indian barley, which has hitherto largely been shipped as an admixture of wheat, has been encouraged by an alteration in the wheat contracts reducing the permissible admixture of barley from 5 per cent. to 2 per cent The general shortage of barley in 1911 led to a strong demand for Indian barley. Unfortunately the grain exported did not meet with general satisfaction. British buyers complain of an undue proportion of perished grain due to premature harvesting and to careless exposure, to damp. If this profitable market is to be captured the practice of sowing mixed wheat and barley will have to be abandoned and more care will have to be bestowed on the barley crop.

Decreases.—The most marked decreases are raw cotton Rs. 128 lakhs, wheat Rs. 35½ lakhs, rape and mustard Rs. 30½ lakhs, railway plant (other sorts) Rs. 42 lakhs and unrefined sugar Rs. 11½ lakhs. Shortage in the Punjab coinciding with a bumper crop in America explain the cotton figures As the exports of wheat from India increased during the year, the contraction in the Punjab exports is surprising. The figures relate to the rabi of 1911, which was a somewhat disappointing crop. Exports of wheat flour have increased by 2,000 tons in weight and Rs. 1,86,000 in value, the chief markets being the United Provinces, Bengal, Rajputana and Central India.

The heavy decline in rape and mustard, in weight 29,000 tons, is due no doubt to a short harvest in 1911. Karachi took Rs. 187 lakhs worth and Calcutta nearly Rs. 45 lakhs. The latter figure is somewhat surprising at first sight, but Calcutta is always a good customer and took Rs. 43 lakhs worth last year.

Animals.

438. Animals to the value of Rs. 7,20,395 were imported by rail and exported to the value of Rs. 1,28,17,713. The chief imports were cattle from Rájpútána and horses from Sind, the United Provinces and Calcutta. Among exports cattle for the United Provinces and Bombay and horses for Bengal, the United Provinces and Rájpútána figure largest.

Treasure.

439. Under imported treasure totalling Rs. 3,64,57,451, gold, coin and bullion, contributes Rs. 95,56,515, silver coin Rs. 46,35,812 and silver bullion Rs. 2,22,65,124. Silver bullion has risen by Rs. 73 lakhs. This is a fairly stable commodity which has only varied between Rs. 150 and 240 lakhs in the last five years. Silver coin, on the other hand, is astonishingly volatile. The imports fell from Rs. 300 lakhs to Rs. 10 lakhs in 1908 and 1909, then rose to Rs. 119 lakhs, and for the last two years have fallen steadily. Gold imports grew steadily up to last year, when the highest figure ever recorded was reached. They have declined this year by no less than Rs. 185 lakhs, but are still Rs. 20 lakhs higher than in any year previous to 1910-11. On the other hand, silver coin to the value of Rs. 1,19,94,308 was exported and Rs. 1,23,532 in silver bullion, the total exports of treasure reaching Rs. 1,21,17,840.

River-borne trade.

440. The river-borne trade for the last three years compares as follows :–

Year.	Imports.		Exports.	
	Maunds.	Value in rupees.	Maunds.	Value in rupees.
1909-10	222,020	15,91,281	2,001,519	78,74,220
1910-11	238,780	16,48,553	2,018,975	69,89,559
1911-12	246,020	17,58,896	2,279,630	75,75,212

Wheat, the only considerable export (Rs. 42 lakhs), shows a shrinkage almost proportionate to that of the rail-borne wheat. Nothing short of a revolution in towage methods will vivify the great water-ways provided by the Punjab rivers.

Distribution of trade by localities.

441. The Delhi Durbar naturally attracted a good deal of extra trade to the city. The total increase of imports to Delhi was about 130,389 tons.

Trade with Trans-Frontier Countries.

Trade with Afghanistan.

442. The trade with Southern and Western Afghanistan is registered at the Border Police Post at Khar in the Dera Gházi Khan district. This year, as last, no trade followed the route *viâ* Peshin or Toba from Kandahar ; all being recorded as using the route *viâ* Musa Khel, Zhob and Kamar-ud-din Karez. The total imports are valued at Rs. 37,000, a decrease of nearly Rs. 54,000. The only important increase is of raw wool, due to low prices in Afghanistan. The chief decreases are under fruits, ghi, other saline substances and timber, by far the largest decrease being under fruits. This is attributed to high prices in Afghanistan and to a preference on the part of traders for other routes. No tea was imported at all. Exports have also decreased by Rs. 31,000 and are put at Rs. 23,000, the chief decreases being under rice, manufactured leather, European cotton piece-goods and sugar. In the case of rice the falling off is attributed to the high price of this commodity in the Punjab, and in the case of the other articles to the inability of the Pathan traders to compete with those who use easier routes *viâ* Chaman and other places. Another possible explanation is that high prices in Afghanistan, due to the poor autumn harvest of 1911, left the people small margin for luxuries.

Trade with Ladakh.

443. All the trade with Ladakh passed *viâ* the Sultanpur and Kulu route. The trade post is at Sultanpur. Imports increased in value by Rs. 14,000 to Rs. 1,79,000, due to an increased import of charas of 500 maunds in weight and

Rs. 42,000 in value. The progressive increase in charas imports is due to the free manufacture of the drug in Yarkand.

The trade in borax continues to diminish. Large stocks had been sent in to the province by the late contractor in Ladakh, whose contract ended in 1909-10, and these stocks remain still to be worked off. A decreased import of raw silk to the value of Rs. 18,000 is attributed merely to a natural fluctuation of trade. The falling-off in the import of wool (33⅓ per cent.) is said to be due to the continuing diversion of the trade to the Almora route, and also to the fact that traders' flocks were surprised on the Láhul side of the Rohtang Pass by early snowfall.

Exports are reported as valued at Rs. 1,21,000 exclusive of treasure. The trade in coral seems to be reviving. The decrease in the export of European cotton piece-goods (21 per cent.) has been more than compensated for by an increase in Indian cotton piece-goods of 26 per cent. Exports of green tea fell from 901 to 645 maunds. This year's exports consisted entirely of Kángra tea, and it is said that more tea than before went to Leh from Amritsar by other routes. The export of black tea shews a progressive increase.

Trade with Tibet.

444. The greater part of the trade with Chinese Tibet passes by the Simla routes. Imports have decreased in value by nearly 4 per cent. to Rs. 2,48,000. The chief heads of decrease are "Horses, ponies and mules" and borax, while the only noticeable increase is under "Skins of sheep and goats." Exports have decreased by nearly 20 per cent. and are valued at Rs. 62,000 exclusive of treasure. The chief decreases are under precious stones, manufactured silk, coral and Indian cotton piece-goods. The only noticeable increases are under European cotton piece-goods, brass and copper and rice. Exports of silver also declined by Rs. 24,000.

The bridge at Dankar on the Spiti route to Shalkar or Shipki has been repaired and opens up the most direct route between Simla and Rudok. At the instance of the British Trade Agent at Gartok, experimental trade posts have been established at Patsar in Láhul and Sángla in Bashahr to register the imports of wool to Láhul in Kulu and to Garhwál *viâ* Bashahr, the volume of which is said to be considerable.

Joint Stock Companies.

Legislation.

445. The most important event of the year has been the passing of the Life Assurance Companies Act and the Provident Insurance Societies Act. The effect of the former is not yet apparent, except in the hurry of one company to divest itself of some of its more disreputable activities; but the mere enactment of the latter has had immediate and beneficent results. The registration of new Provident Societies has ceased; the police are on the track of some of the existing companies; and many others are hastening into voluntary liquidation.

Number of companies.

446. Fifty-seven new companies with share capital have been registered during the year. No fewer than thirty-six of these are Provident Societies of the type for the regulation of which Act V of 1912 was passed. Five banks—some at least of which hardly appear to intend to do real banking; a European company for exploiting the rubber of cryptostegia grandiflora; a company for the supply of electric power in Lahore; a cotton-ginning factory established and run by a body of land-owners, and a sugar factory are the most important of the other new companies. Twelve companies have gone into liquidation or ceased to exist. Here again the Provident Societies bulk largest with seven collapses. There are now 194 companies at work, with a nominal capital issued of Rs. 290 lakhs, of which Rs. 194 lakhs are fully paid up. These companies are classified as follows:—Banking and loan 33, Insurance 43, Trading 64, Mills and Presses 36, others 18.

Capital.

447. Out of the paid-up capital of Rs. 1½ lakhs appertaining to the newly registered companies, Rs. 1,15,958 are to the credit of two companies, which formerly had their registered offices in the North-West Frontier Province and

have moved into the Punjab. Seventy-eight existing companies have increased their paid-up capital by Rs. 8¼ lakhs, but in three cases there was a reduction totalling Rs 483. The defunct companies had paid-up capital of Rs. 96,958. The net result is that the investments in joint stock companies have increased by Rs. 8½ lakhs.

Miscellaneous.

448. The number of companies limited by guarantee has increased by 1 to 23. No recourse was had to the provisions of Act IV of 1890. Thirteen societies were registered under Act XXI of 1860.

34.—Buildings and Roads.

General.

Administrative changes.

449. The Gujránwála Division was abolished on April 13th, 1911, and its Gujránwála sub-division transferred to the Lyallpur Division. Its Siálkot sub-division was broken up and the districts of Siálkot and Gujrát incorporated in the Gujránwála and Jhelum sub-divisions. From April 1st, 1911, the Jhang sub-division of the Lyallpur Division was abolished and the works in the Jhang district transferred to the Shahpur sub-division of the same Division.

Valuation of buildings.

450. The capital cost of the Imperial buildings, permanent, semi-permanent, and temporary, in charge of the Department, was Rs. 75,83,212 which were maintained at a cost of Rs. 92,076. Provincial buildings of a capital value of Rs. 3,14,26,400 were maintained at a cost of Rs. 4,17,206. The Provincial buildings, for which capital and revenue accounts are kept, are valued at Rs. 12,00,572 and cost Rs. 23,379 to maintain. The Provincial receipts of the Department amounted to Rs. 1,64,000, including some Rs. 63,000 from rents of buildings and Rs. 41,000 from sale of produce.

Explanation of figures.

451. In the following paragraphs the outlay on "original works" and "repairs," as given, does not include charges for establishment and tools and plant which are included in the totals under each major head. These totals, however, are themselves reduced by *minus* entries under "suspense" or "expended in England." The percentage of cost of establishment on expenditure was in the case of Imperial Military Works 17·36 per cent., for Imperial Civil Works 11·99 per cent., and for Provincial Works 17·57 per cent.

Total Outlay.

452. The total expenditure by the department on Public Works amounted to Rs. 61,53,299 distributed over Imperial Military Works Rs. 1,48,138, Imperial Civil Works Rs. 5,19,774, Provincial Civil Works Rs. 1,92,468, Contribution Works Rs. 2,34 893, and Durbar works Rs. 58,026.

Imperial Works.

Military.

453. The total outlay was Rs. 1,48,138, of which Rs. 60,167 was on original works and Rs. 64,084 on repairs. The works undertaken were buildings and roads in the Sargodha Remount Depôt, stables in the Jhelum Colony and supply houses on military routes.

Civil.

454. The total outlay was Rs. 5,19,774, of which Rs. 3,61,760 were expended on original works and Rs. 1,38,852 on repairs. The "Delville" and "Bemloë" estates at Simla were purchased during the year for the Imperial Government. Works completed or in progress include the Council Chamber at Viceregal Lodge, Simla; Post and Telegraph offices at Dharmsála, Fázilka (Ferozepore), and Chaura Maidan, Simla, and the Railway Parsonage at Lahore. The Telegraph Office, Lahore, was under alteration and a laboratory and residence was built for the Officer Investigating Camel Diseases and his staff at Soháwa (Jhelum).

Famine Relief.

No expenditure.

455. The province has been spared from the necessity for any outlay on famine relief.

Provincial Works

Civil Buildings.

456. The total outlay on original works was Rs. 18,92,006 and on repairs Rs. 3,69,013. The outlay on works was distributed over Land Revenue, Rs. 1,23,384 ; Agriculture, Rs. 53,378 ; Education, Rs. 4,46,680 ; Law and Justice, Rs. 93,056 ; Jails, Rs. 3,77,981 ; Police, Rs. 1,72,664 ; Medical, Rs. 3,29,268 ; Public Works Department and Miscellaneous Rs. 95,473 ; Monuments and Antiquities, Rs. 1,06,258 ; Administration (Miscellaneous) Rs. 72,506 ; Forests Rs. 10,350 and Burial grounds Rs. 11,008. **Outlay.**

457. A house was purchased for the residence of the Deputy Commissioner, Gurgaon, and buildings at Rewári (Gurgaon) and Ráwalpindi for boarding houses for the Government schools. **Works completed.**

The principal works completed were the District record room, Siálkot ; tahsils at Ferozepore and Dera Gházi Khan ; District Courts, Dharmsála ; Assistant Commissioner's Court and residence, Sheikhupura (Gujránwála) ; Court rooms, Jullundur ; additions to the Agricultural College, Lyallpur ; Boarding-house, Siálkot ; temporary High School, Dera Gházi Khan ; workshop at the Central Training College, Lahore ; extensions of the Chemical Laboratory, Government College, Lahore, and of the Normal School, Ráwalpindi ; Engineering College, Rasul (Gujrat) ; Munsif's Courts at Lyallpur and Fázilka ; Divisional Court house, Ludhiána ; section translators' rooms at the Chief Court ; tuberculosis ward, Montgomery Jail ; water-supply for Central and District Jails, Multán ; quarters for jail staff, Central Jail, Lahore ; Police Stations at Sarfathu and Thikriwála (Lyallpur), Pattoki and Ganda Singhwála (Lahore), Nihal Singhwála, Fázilka and Makhu (Ferozepore), Haveli and Okara (Montgomery), and Dera Gházi Khan ; police lines at Dharmsála ; rest-houses at Bhawarna (Kángra) and Musakhel (Mianwáli), and residences for the Deputy Commissioner, District Judge, Revenue Assistant and Divisional Forest Officer at Dharmsála.

458. Work was in progress on the District Court, Ludhiána ; court-rooms and offices, Hoshiárpur ; Agricultural Station, Gurdáspur ; High Schools at Gujrát, Campbellpur (Attock), Dharmsála and Jullundur ; Queen Mary's College ; Lahore ; Primary school block, Muzaffargarh ; Borstal Central Jail, Lahore, Subsidiary Jail, Dharmsála ; Reformatory School, Delhi ; Police parade ground, Dharmsála ; Police stations at Kángra, Shahpur, Jowála Mukhi and Sujánpur Tirah (Kángra), Shahkot (Jullundur), Chutiana (Lyallpur), Shorkot (Jhang), and Chaensa (Delhi) ; Vaccine Institute, Lahore ; dispensary at Jaranwála (Lyallpur) and new Leper Asylum at Subáthu (Simla Hills) ; residence for the Executive Engineer, Multán, and for the Head Clerk to the Commissioner, Jullundur ; rest-houses at Jagraon (Ludhiána), Firozpur-Jhirka (Gurgaon), Bankhandí (Hoshiárpur), Kalanaur (Gurdaspur), and Dera Gházi Khan. **Works in progress.**

459. The greater part of the expenditure on antiquities was incurred in the Delhi Fort in connection with the Durbar. To make the place suitable for the occasion, the gardens in front of the Diwan-i-Am, Rang Mahal and Mumtaz Mahal were restored. The portion of the archæological area known as the Hayat Bakhsh Garden had been restored in previous years, the old water channels being reconstructed and the plots between them laid out in grass lawns and flower beds. The whole of the proposed works were now completed and the remainder of the area was laid out in a similar manner, the sites of the old Moghul buildings being marked by shrubberies. Water from an elevated tank constructed in 1910 was laid on to the marble channel which runs down the centre of the Palace buildings, and also to the fountains of the Hayat Bakhsh Garden, which played throughout the afternoon of the Garden Party. A low ornamental parapet of red sandstone was erected on the east wall of the Fort in place of an old, unsightly and flimsy iron one. The projecting balcony between the Samman Burj and Rang Mahal was adapted as a "jheroka", and here Their Majesties on the afternoon of the 13th December sat in State to watch the **Works at Delhi.**

Badshahi Mela which was being held below. The Mumtaz Mahal, formerly used as a Sergeants' Mess, was restored (modern additions being removed) and was converted into a Museum of Archæology.

King Edward Memorial.

460. An Executive Engineer of the department was on special duty during the year working out the preliminary estimates. The designs for the King Edward College and for the Research Institute were selected from the competitive designs submitted in response to an advertisment which had been inserted in the leading papers and engineering periodicals of the country. Steps were also taken towards acquiring the extra land required known as the Beef Market and Chajju Bhagat's Chaubara sites. The foundation stone was laid by His Honour Sir Louis Dane, G. C. I. E., on the 21st December 1911, but actual building work was not started until the formation of a special executive division for the works in April 1912.

Communications.

Roads.

461. The outlay on works amounted to Rs. 2,14,974 and on repairs to Rs. 10,88,145. Forty-six miles of feeder roads were completed in the Ambála, Lyallpur and Shahpur districts. A length of 19 miles of feeder road is under construction in the Ambála and Karnál districts as well as the roads Dera Gházi Khan-Chorutta, Rupar-Nálagarh (Ambála), and Tibri-Beas (Gurdáspur). The maintenance of 1,105·24 miles of Provincial metalled roads by the department cost Rs. 776 a mile and that of 124·42 miles by district boards Rs. 559. District boards spent Rs. 390 per mile on their own metalled roads, 1,384·77 miles in length. On unmetalled Provincial roads the department spent Rs. 148 per mile on 752·31 miles and district boards Rs. 16 a mile on 1,035·21 miles. On 18,972·98 miles of unmetalled district board roads the boards spent Rs. 8 per mile. The total length of roads outside municipal limits amounts to 2,614·43 miles metalled and 20,760·50 miles unmetalled.

The dák bungalows at Ludhiána and Karnál were completed and suspension bridges constructed over the Spiti river at Dankar and the Sutlej at Chaura and Jhakri (Simla Hills).

Ferries and boat bridges.

462. Boat bridges were maintained throughout the year at Wazírabad (Gujránwála) and Shahdara (Lahore), and for the cold weather at Khusháb (Shahpur) and Dera Gházi Khan: also four major ferries over the Jhelum and two over the Beas. A motor launch carries the mails and first class passengers over the Indus at Dera Gházi Khan, and a steam ferry is maintained there during the flood season.

Miscellaneous Public Improvements.

Outlay and Works.

463. The expenditure on Miscellaneous Public Improvements amounted to Rs. 7,82,897 on works and Rs. 71,265 on repairs. The Simla Hydro-Electric Scheme is making good progress. The head works, flume and tunnel through which it passes, pressure duct, all staff and Engineer's quarters, transmission lines from Simla to Chaba and Chair, and two small sub-stations have been completed. Good progress has been made with the reservoir, pipe track, power-house and main sub-station. The high tension mains, and the low tension net work, are well advanced. Contracts have been placed for the hydraulic equipment, power-house plant, supply and laying of cables, and for transformers and switch gear. In connection with the Simla Water-Works Extension all staff quarters, the road to the pumping station at Chair and the gravity mains have been completed. The work on the construction of the weirs and pumping station is well in hand. Work was commenced in October 1911 on the construction of a masonry dam, across the Nammal Gorge (Miánwáli), to hold up water to supply a canal which it is intended to construct for irrigating the country between the foot of the hills and the town of Miánwáli. The maximum height of the dam will be 105 feet, and the storage capacity is estimated to be 630 million gallons. A good deal of work was carried out in the new colony towns of Jaranwála and Tándliánwála (Lyallpur), Sillanwáli (Shahpur) and Chuharkhána (Gujránwála), and also at the new civil stations of Dharmsála and Dera Gházi Khan. An expenditure of Rs. 58,026 was also incurred on works connected with the

Coronation Durbar, of which Rs. 37,417 for works in the Punjab Provincial and Central Camps were debited to the Punjab Government and Rs. 20,609 were met by the Durbar grant from Imperial Funds.

PROVINCIAL EXPENDITURE.

464. The total Provincial outlay of the year amounted to Rs. 51,92,468, including Rs. 22,61,019 under Civil buildings, Rs. 13,03,419 under Communications, and Rs. 8,54,162 under Miscellaneous Public Improvements. Establishment absorbed Rs. 7,76,389 and tools and plant Rs. 82,210, but a credit of Rs. 84,731 is shown under "Suspense." **Total outlay.**

CONTRIBUTION WORKS.

465. The department expended a sum of Rs. 2,34,891 from funds supplied by municipalities, district boards, private sources or departments other than those already dealt with. The works included metalling roads at Lyallpur and from Chiniot to Kot Khudayár (Jhang), drainage works at Montgomery and Pattoki (Lahore), a police post at Ráwalpindi, alterations to the Pasteur Institute and Laboratory at Kasauli, stables at Lyallpur, a High School at Rúpar, alterations to the Punjab University buildings and the construction of a temple and dharmsala in the Aitchison College. The extension of the water-supply and drainage at Lyallpur also falls under this head. In certain cases works are paid for in part by Government and in part by contributing bodies. **Outlay and Works.**

466. Projects aggregating Rs. 29,91,881 were scrutinized for local bodies, and projects aggregating Rs. 10,02,433 prepared for them for works which will in most cases be done by the Government Engineers. **Assistance to Local Bodies.**

PRIVATE WORKS OF PUBLIC UTILITY.

467. Works of public utility aggregating Rs. 2,40,599 carried out by private individuals are reported. The most important are :—A pucca serai with shops at Hoshiárpur, costing Rs. 1,25,000, built by Chamba Ram, of Hoshiárpur ; a pucca serai at Bhangála, Hoshiárpur district, costing Rs. 9,000, built by Rai Wazir Khan, Rajput of Bhangála ; a dharmsala and pucca well outside Nagori Gate, Hissar town, costing Rs. 6,000, built by the widow of Lala Chiranji Lal, Sahukar, Hissar ; a pucca tank at Balwári, Gurgaon district, costing Rs. 9,000, built by Ram Narain Das, Bairagi of Balwári ; a pucca dharmsala at Sohána, Ambála district, costing Rs. 10,000, built by Gopala and Hakim Rai, Khatris of Sohána ; another dharmsala at Sohána, costing Rs. 20,000, built by Rama Nand, Khatri, of Sohána ; a dharmsala and musafarkhana at Kot Radha Kishan, Lahore district, costing Rs. 7,000, built by Lala Behari Lal of Kot Radha Kishan. **Works of Public Utility.**

34 A.—Railways and Tramways.

RAILWAYS.

468. The mileage opened in 1911 includes on the North-Western system the section Shorkot Road to Jaranwála (88 miles) and the Khanpur-Chachrán line, which is owned by the Baháwalpur Durbar, (22 miles), also the Hissar extension of the Jodhpur-Bikaner Railway (31 miles), a total of 141 miles. Nor does construction in the future shew any sign of slackening as work was begun on the Sarai Kála-Havelián section of the line to Srinagar (only partly in the Punjab), the Jakhal-Hissar and Jullundur-Hoshiárpur branches of the North-Western Railway proper and the Jullundur Doab lines of the Southern Punjab Railway. On the other hand, the line from Jínd to Pánipat, projected by the Jínd Durbar, has been blocked for 18 months owing to difficulties about traffic from Jínd city station between the East Indian and Southern Punjab Railways. Similarly questions of the sphere of interest of metre and broad gauges have blocked the metre gauge line which the Patiála Durbar wishes to construct from Patiála to Jakhal and Hissar or Sirsa. To deal with the exceptional traffic of the Coronation Durbar at Delhi the North-Western Railway con- **New lines.**

structed a total length of 19 miles of railway of which 10 were double line, together with the requisite buildings and yards. The arrangements made proved adequate and all traffic was handled with promptitude.

Accidents.

469. No accident of a serious nature occurred on any railway in the Punjab in 1911, and the lines were free of any considerable damage by floods or rainfall.

Statistics of North-Western Railway.

470. Some idea of the vast organization of the North-Western Railway can be gathered from the following figures reported for 1911 :—

Mileage open, 4,880.	Train mileage, 21¾ millions.	Capital, £54½ millions.	Gross earnings, £6 millions.	Working expenses, £3½ millions.	Net earnings, £2½ millions.

In 1911 alone the capital outlay was increased by over 2 millions sterling and on the vast capital expenditure of the system, practically one-quarter of which was incurred on military and unremunerative sections, the net earnings shew a percentage return of practically 4½ per cent. The net earnings of the Kálka-Simla Railway alone continue to fall short of the interest charges on the capital outlay by some £20,000 per annum.

Tramways.

Delhi Tramways.

471. Electric trams are operated in Delhi by the Delhi Electric Tramways and Lighting Company, Limited, with a mileage of 9½ miles of single track. The streets in which the lines are laid are—Sabzi Mundi, Kutab Road, Sudder Bazar, Khari Bowli, Katra Baryan, Lal Koah, Chowree Bazar, Esplanade Road, Chandni Chowk, Mission Church Road, Queen's Road and Koria Pool.

The car mileage run in 1911 was about 375,000 miles and some 2½ million passengers were carried. The Durbar traffic, however, had considerable influence on the figures.

Patiala Monorail.

472. A length of 15 miles of tramway has been constructed at a cost of Rs. 1,94,000 by the Patiála State on the monorail system from Sirhind Station, on the North-Western Railway Main Line, north to Morinda in the Ambála district. The line was opened on February 1st, 1907, and earns some Rs. 2,500 per mensem, against expenses of Rs. 2,000 per mensem. The line is operated by mule traction and only carries passengers.

Jagadhri Light Railway Company.

473. A light railway on the 24-inch gauge, 3·32 miles in length, connects Jagadhri Town (Ambala) with Jagadhri Station on the North-Western Railway, Main Line. The line was constructed and is worked by a limited liability company, the shares in which are held locally. The moving spirit in the enterprise is Rai Bahadur Lala Joti Parshad, Rais of Jagadhri. The railway was opened for traffic on August 11th, 1911, by His Honour Sir Louis Dane and both passenger and goods traffic are handled. It is reported that up to December 31st, 1911, the capital outlay was Rs. 1,05,600; the train mileage run from August 11th to December 31st, 1911, was 6,316 miles, the expenditure Rs. 6,985 and the traffic earnings Rs. 7,995. The railway is worked by steam, and was constructed under the Indian Tramways Act (XI of 1886). So satisfied are the promoters with the result of their enterprise that an extension to Chachrauli, Sadhaura and Kala Amb is contemplated.

35.—Irrigation.

General.

General results.

474. The total area irrigated in British districts and Native States by canals in charge of departmental officers is 8,269,233 acres, to which must be added some 62,659 acres irrigated in the Jínd State by the State authorities from water afforded by the Western Jumna Canal. Generally speaking, the conditions

of the year were favourable to irrigation on perennial canals, which show excellent results. On the inundation canals the low supplies in the rivers and poorness of the rainfall have reduced the area of irrigation, but in the circumstances the results obtained are gratifying.

On the eight Major Canals in operation a capital outlay, direct and indirect, of Rs. 18,91,093 was expended, bringing up the total cost of these canals to Rs. 11,62,22,814, upon which a nett revenue of Rs. 1,87,53,983 was obtained, giving a profit of 16·13 per cent. The gross interest charge on the above capital is taken at Rs. 37,83,076, and the nett profit after paying interest amounts to Rs. 1,49,70,907.

On the two Minor Canals for which capital accounts are kept the total capital cost is now Rs. 5,75,658, upon which a nett loss of Rs. 14,726 was experienced. Including these canals, the nett profit from all Imperial Minor Canals (which are not classed as productive) was Rs. 6,58,490.

On the two Provincial Canal systems the nett loss during the year was Rs. 14,500.

On the canals of the Triple Project Rs. 1,43,88,916 were expended on capital account in direct and indirect charges, upon which the annual interest charge accruing is calculated as Rs. 19,23,109. The total capital expenditure on these canals now stands at Rs. 6,50,39,936.

The gross Imperial capital now invested in the Punjab Canals is Rs. 18,18,38,408, or over £12 millions sterling. The details for each canal are given in subsequent sections.

Major Works—Canals in operation.

Western Jumna Canal.

475. In common with the other canals of the province, the failure of the monsoon and poor winter rain occasioned a largely increased demand for canal water, for which supplies were about average and were run for a longer period than ever before. It was not possible to close the canal during the year. The fodder famine led to an increased resort to fodder crops, and these crops and the supply of water free of cost to village tanks kept the cattle alive. The kharif area was matured with great difficulty; jowar and particularly cotton giving anxiety throughout. The rabi area matured was much larger than usual. The total area irrigated, exclusive of 62,659 acres on the Jind distributaries, was 712,791 acres, which in the circumstances is not particularly high and is 51,689 acres less than the maximum area of design. For this result the unusual nature of the kharif harvest is responsible. Inclusive of a capital expenditure during the year of Rs. 47,784, the total cost of the canal to the Imperial Government is now Rs. 1,74,38,243. Upon this a nett revenue, inclusive of indirect income from land revenue due to canal irrigation, of Rs. 13,55,317 was obtained, giving a percentage of 7·77 on the total outlay. Against this profit an interest charge on capital outlay of Rs. 5,64,916 is debited. The nett revenue received by the Patiála State on their channels from the Sirsa Branch amounted to Rs. 1,34,827, or 11·76 per cent. on the capital outlay. The profit to the Jínd State from the working of their distributaries was Rs. 1,12,153. This improvement is due to the inclusion of "owner's rate" in the account. The supply to the State has now been raised from 343 to 353 cusecs.

Navigation receipts amounted to Rs. 38,792 and maintenance charges to Rs. 5,661, but practically the whole of the income is derived from rafting timber; principally in the head reach Tájawála to Abdullapur. Of the total, receipts from boat traffic were Rs. 1,028 only and maintenance cost Rs. 5,239. The number of boats is now only 32, and it would be a great advantage if the fleet were entirely to disappear, as the canal is unsuited to navigation.

The irrigation staff of this canal were entrusted with the task of constructing and controlling all irrigation channels required at Delhi for the Durbar and of constructing and maintaining all surface drains. This task coinciding with a year of drought made the past year an eventful and exacting one for the staff.

Surveys were carried out to investigate possible improvements, either by canalising the existing main line or by making fresh head works lower down the river and constructing a new main line. The final projects are now being worked out. The success of the silting reach at Indri has been complete, and it is hoped in time to reclaim all the swamped area in this way. The Delhi end of the Saadat Khan Canal has been filled in and replaced by a masonry conduit along the Queen's Road. The canal will gradually be contracted along its entire length. There is keen competition for the valuable sites rendered available in Delhi by this improvement.

The experience gained on the Chautang proves that a kharif canal from the Jumna will not pay, as the early and late supply is too uncertain to admit of any but the poorest crops being grown.

Sirhind Canal.

476. On the Sirhind Canal the great drought in the kharif and insufficient rainfall in the rabi led to a very large demand for canal water for areas that in more favourable seasons do not require it. The demand appears to have been met without difficulty; but the canal was only closed for two days. The area irrigated was 475,145 acres in the kharif and 1,134,313 acres in the rabi. The total, 1,609,458 acres, is nearly double the average of the previous triennium ending 1910-11, which was 857,706 acres. The capital expenditure during the year was Rs. 83,378 in various small works. Of this, Rs. 76,871 were spent on Imperial Branches, and the Imperial capital invested now amounts to Rs. 2,51,55,196. Upon this a nett revenue of Rs. 20,61,099 was obtained, equivalent to 8·19 per cent., against which an interest charge of Rs. 8,13,319 is set. On the Native States branches the profit earned was 7·31 per cent. No land revenue is at present credited to the Sirhind Canal account as being due to irrigation. The navigation traffic amounted to 24,917 tons and the receipts from tolls and raft dues to Rs. 16,531. Both are increases on the figures for the previous year. Maintenance charges under navigation absorbed Rs. 10,250.

The Siswan superpassage causes anxiety, but it is hoped that the closures necessary for works to secure its stability may be restricted from a month to a fortnight in future. Schemes to prevent percolation from the channels of this canal are in the experimental stage, but the estimates for the works contemplated amount to Rs. 10 lakhs. A scheme to extend irrigation in the Sirsa tahsil is being taken up and a survey is in hand for a channel from the Bhatinda Branch.

Upper Bari Doab Canal.

477. On the Upper Bari Doab Canal the dry summer led to an intense demand, to meet which in the kharif a low river was experienced. In the rabi the river was favourable. The canal was run without intermission, and heavy shingle deposits resulted. In consequence of the enforced economical use of the water the duties were 90 acres in the kharif and 223 in the rabi, which are exceptionally high figures. The area irrigated in the kharif was 496,191 acres and in the rabi 660,617 acres. From these areas remissions of assessment were given on 48,097 acres. The total irrigation, 1,156,808 acres, and the rabi area are the highest yet recorded on this canal. Expenditure on capital account amounted to Rs. 4,33,741, bringing the total for the canal to Rs. 2,14,49,274. Rs. 2,30,770 were debited under "suspense" as the year has been a heavy one in the workshops. Under "works" the expenditure was Rs. 2,02,971, and was incurred among other works upon lining two miles of the Main Branch Lower near Amritsar and upon the new Niaz Beg distributary, which will be opened in kharif 1912. Upon the capital outlay a nett revenue of Rs. 24,44,337 was realised, equivalent to a percentage of 11·40,

which is about the present normal. The interest charge is Rs. 6,97,453. A new division was formed during the year, consisting of the Kasur Branch, Upper and Lower, and the Sobraon Branch, to relieve the Head-Works Division. The change has resulted in an increase in efficiency. A determined effort to cope with water-logging is being made on this canal. Extensive lining works are in progress, and the important Hudiara drainage is being deepened and graded to provide a better outfall.

A new foundry is under construction at the Central Workshop and the new steel workshop has been brought into use. The outturn of iron castings from the foundry reached the record figure of 13,756 maunds. The year has been an extremely busy one in the workshops; iron and steel work being completed for head works on the Upper Chenab, the Lower Chenab, the Lower Jhelum, the Lower Bari Doab and the Upper Jhelum Canals. The rates charged for the outturn have been lowered, and the manufacture accounts closed with a credit balance of Rs. 2,725. The Superintendent, as Boiler Inspector, inspected locomotives and portable engines on the various canals as became necessary.

Lower Chenab Canal.

478. On the Lower Chenab Canal the year was a favourable one. The demand for water was good and the supplies were sufficient in the kharif, but in the rabi were insufficient in December, February and March. The area irrigated in the kharif was 710,931 acres, of which 87,308 failed, and in the rabi 1,623,159 acres, with 25,743 acres of failure. The total area is well in advance of the average for the previous three years. Of the total irrigated area, 419,755 acres were in old proprietary and 1,914,335 acres in colony villages. The kharif duty was 78 and the rabi duty 199. These results are on the whole very favourable. A large number of capital works are in progress at the head works with a view to keeping the canal clear of silt, which in recent years has given cause for great anxiety. In all Rs. 11,23,742 were spent on capital account, bringing up the total cost of the canal to Rs. 3,01,72,899: upon this a nett revenue, including land revenue due to irrigation, of Rs. 1,02,78,146 was obtained, equivalent to a percentage of 34·06. Enhancements of the land revenue demand have during the year largely increased the indirect revenue of this canal. The accummulated nett profits now exceed the cost by Rs. 3,69,40,162. The interest charge is Rs. 9,82,780.

Lower Jhelum Canal.

479. On the Lower Jhelum Canal a fairly large kharif area was sown, but great damage was done at the beginning of the season by grass-hoppers, and the ravages of boll worm necessitated a remission to the extent of 34 per cent. of the cotton crop. The rabi season was entirely favourable. The area irrigated in the kharif was 232,030 acres and in the rabi 567,619, of which 98,165 acres in both harvests failed. Of the total area, 373,773 acres were in old proprietary villages and 425,876 in colony villages. The outlay on capital account during the year was small, and the total cost of the canal was reduced to Rs. 1,61,61,606, owing to recoveries from cultivators of the cost of water-courses and to larger issues from stocks. Upon this a nett revenue, including land revenue due to canal irrigation, of Rs. 17,11,569 was realised, giving a percentage of 10·59. The date for the completion of the canal is now fixed as March 1913, but work on the Shahpur Branch is at present in abeyance and the date will have to be extended again.

Upper Sutlej Canals.

480. The early falling-off of the river with heavy silt deposits and consequent early closing of the canals reduced the irrigated area on the Upper Sutlej Inundation Canals. The total irrigation was 159,973 acres in the kharif and 106,040 acres in the rabi harvest. The capital cost of the system is Rs. 17,49,503 upon which a nett income of Rs. 2,60,797 was realised, giving a return of 14·91 per cent. The interest charge is Rs. 56,109. The Katora flowed 137 days, the Khanwah 182, the Upper Sohag 155, and the Lower Sohag 157.

Sidhnai Canals.

481. On the Sidhnai system the kharif irrigation was good, while the rabi was below average owing to a low river. The Ravi ran dry at the end of October and was dry all the winter, except for three weeks in February, when a

freshet saved the rabi crop from further loss. The canals were in flow for 212 days. The year was no more than fair. The total irrigated area was 119,674 in the kharif and 129,896 in the rabi: of this 31,456 and 14,350 acres, respectively, failed. The capital cost of this system is now Rs. 13,37,469, upon which a nett income of Rs. 5,05,820 was obtained, inclusive of land revenue due to irrigation. The canal thus returns a percentage of 37·81 on its cost and is still the most remunerative canal in the province. The interest charge is Rs. 43,993.

Indus Canals.

482. On the Indus Inundation Canals excellent results were obtained, through the Nur Dhundi and Kadra Canals remaining open during the winter. On the other hand, the westerly set of the river silted up the heads and caused the Kasturi and Dhingana to cease running for a short time in July. The total irrigated area was in kharif 183,890 acres (including 51,228 acres failed) and in rabi 94,717 acres (including 11,474 acres failed). The annual total is the second highest on record. On capital account Rs. 2,25,210 were disbursed on extending the Manka Canal and on the Talai Project, which absorbed Rs. 1,80,282, chiefly on works on the Kadra Canal. The nett income obtained was Rs. 1,36,898, giving a return on capital of 4·96 per cent. The interest charge is Rs. 87,545. The working of the last triennium resulted in an average annual loss of Rs. 1,90,525, and the working of the past year has been unusually successful. A good deal of the increase in profit is due, however, to reduced working expenses.

Imperial Minor Works with Capital Accounts.

Shahpur Imperial Canals.

483. The insufficient supply in the river and failure of the monsoon combined to reduce irrigation on the Shahpur Canals. The areas irrigated were 8,404 acres in the kharif and 14,462 in the rabi, of which 4,648 acres in both harvests failed to mature chiefly owing to the short supply. The capital outlay on this system is Rs. 2,15,914, and the year's working shows a loss of Rs. 778.

Ghaggar Canals.

484. On the Ghaggar Canals probably the worst year on record was experienced. The Northern Canal flowed for 46 days and the Southern for 32 days and the supplies never reached the minimum at which the Bikáner State participates. The total irrigation was no more than 3,902 acres in the kharif and 2,691 in the rabi, and there was none whatever in Bikáner. The failed area was 136 acres. Capital outlay to the extent of Rs. 15,942 was spent on improving distributaries, making the total outlay Rs. 3,59,744. The year's working resulted in a loss of Rs. 13,948 or 3·88 per cent. on the capital. The Bikáner State has expended Rs. 3,84,319 in capital on the canals, and during the year spent Rs. 9,101 on maintenance without any return. A scheme to alter the regulators and initiate floodings as soon as the Ghaggar rises was opposed by villages adversely affected and cannot be carried out in its present form. A project for increasing the storage capacity of the Otu lake is in hand, and in spite of the intricate nature of the problem, it is hoped that a workable scheme may be evolved.

Imperial Minor Works with Revenue Accounts only.

Lower Sutlej Canals.

485. In spite of difficulties with the river, experienced on two of the canals, the year was not a bad one. Hajiwah flowed for 124 days, Mailsi 221, Muhammadwah 174, and Bahawalwah Lodhran 116. The kharif area irrigated was 118,274 acres and the rabi area 124,603. The failed area for the year was 44,094 acres or 18 per cent., a creditable figure, indicating good distribution. The nett working of the year shows a profit of Rs. 1,56,709. The lowness of the figure is explained by heavy expenditure on improvements and reduced supplies during the year. The Mailsi and both Jamwah Canals have been widened to permit of all outlets running full discharges during floods and to work down silt; a partial amalgamation of the Muhammadwah with the Bahawalwah Lodhran Canal has been carried out: and the number of outlets

of masonry or of steel or iron tubes has been increased. Some progress has been made with the substitution by the zamindars of proprietary "minor" distributaries for long parallel water-courses with considerable improvement in distribution.

Chenab Canals.

486. On the Chenab Canals the river was high up to July, but afterwards gave insufficient supplies for the keen demand. The high river damaged the head of Wali Muhammad Canal. These causes combined with lack of rain reduced the rabi area. The total irrigation was 100,252 acres in the kharif (33,753 failing) and 82,319 in the rabi (9,958 acres failing). The nett revenue of the year was Rs. 2,16,992 which is about normal. The new distribution scheme (chakbandi) carried out on the Gajjuhatta Canal has been a great success, and a similar scheme is being carried out on the Sikandarabad. The transfer of the Matithal Canal irrigation to the Sidhnai system has been sanctioned. This and other improvements in the canals have been taken up in view of the effect of the triple project on supplies in the river.

Muzaffargarh Canals.

487. The rivers supplying the Muzaffargarh Canals were low throughout the year, especially in July and August when the kharif demand was keen, and distribution caused much trouble, as little assistance was obtained from the rainfall. The rivers rallied during September, and three of the Indus Canals ran well on into the winter. It is doubtful whether these winter supplies should be made use of as they accentuate the water-logging, which has begun to be seriously felt in the district. The kharif irrigation was low at 153,835 acres with 27,753 failed, but the rabi crop was a record one of 223,527 acres, of which 11,142 failed. The total failure of the year was 10·3 per cent. and the rabi figure fell to the record of 4·98 per cent. The nett revenue of the canals was Rs. 2,99,515, a very satisfactory figure for the system, due in large measure to decreased expenditure. On these canals the new distribution scheme (chakbandi) has been completed and the increase in duty shown by every canal is proof of the success of the undertaking. A change in the system of checking failed crops is in contemplation, as it is proposed that the Deputy Commissioner should accept the figures of the Canal Daroghas in certain cases, subject to appeal to a Revenue Officer.

Provincial Canals.

Shahpur and Ravi Provincial Canals.

488. The poor supply on the Shahpur Provincial Canals greatly reduced the area irrigated, which amounted to 13,392 acres in the kharif and 7,288 acres in the rabi, of which 1,286 acres in all failed. The year's working shows a loss of Rs. 9,343, excluding a debit of Rs. 1,612 for expenditure on surveys in connection with the Banhwa and Kahan torrents in Jhelum district. Similar causes affected the Ravi Canals, which only irrigated 4,554 acres in the kharif and 4,687 in the rabi, with 768 acres of failure. The canals suffered from heavy silt-deposits. The year's working involved a loss of Rs. 3,535. The Nikki and Sukhrawa Canals ran 124 days and the Deg 32, but the Jherku did not flow at all.

Miscellaneous.

Rangoi Canal.

489. The Rangoi Canal of the Hissar District Board, which has for some years been in the charge of the Department, was made over to the owning body on April 1st, 1912. During the year the canal was thoroughly overhauled at a cost of Rs. 9,391, but it only ran one day and 57 acres of irrigation only were registered. The water-rate charges are included in the fluctuating land revenue assessments.

The Triple Project.

Upper Jhelum Canal.

490. The Upper Jhelum Canal was started in 1904-05. The object of the canal is to carry surplus water from the Jhelum to replenish the supplies in the Chenab, but it is also designed to irrigate 344,960 acres annually in the

Gujrat district. The canal takes off from the left bank of the Jhelum at Mangla Fort in Kashmír, follows the course of the Jhelum on the north face of the Pabbis to the head works of the Lower Jhelum Canal at Rasúl in Gujrát district, and then strikes across that district to the head works of the Lower Chenab Canal at Khanki. The Gujrát Branch of the canal on the right of the main line will irrigate the western portion of Gujrát district. The direct capital outlay during 1911-12 was Rs. 69,89,561, bringing up the total direct outlay to Rs. 2,51,95,637 out of the revised estimate of Rs. 4,29,40,282. The feature of the construction of this canal is the number, size and cost of the torrent works which have continually provided difficult problems. Since January, night and day work, with a double staff and double shifts, has been introduced to shorten the delay before the canal can be opened, Very great progress has been made during the year, and the great Mangla Cut and the Head Regulator are the only works now likely to cause delay. On the Main Canal $\frac{3}{4}$ths of the earthwork is complete, 1,970 lakhs of cubic feet of excavation having been carried out during the year. Much of the increased progress in earthwork is due to the employment of mechanical means. It is now hoped to complete the main line by April 1914.

Stone quarries at Taraki (Jhelum) are being worked in connection with the Upper Jhelum Canal, and during the year 59½ lakhs of cubic feet of quarry material were despatched to the five participating canals, *viz.*, the Upper and Lower Jhelum, the Upper and Lower Chenab, and the Lower Bari Doab Canals.

Upper Chenab Canal.

491. The Upper Chenab Canal, the construction of which began in 1906-07, is designed to irrigate 648,368 acres annually, chiefly in the Gujránwála district, and to carry supplies to the Ravi for the use of the Lower Bari Doab Canal. The canal takes out from the left bank of the Chenab at Merála in Siálkot district and crosses the Gujránwála district to the Ravi at Balloki on the Lahore-Montgomery border. The Nokhar Branch takes out on the right and the Raya Branch on the left, the latter irrigating in Siálkot district. The direct capital outlay during 1911-12 amounted to Rs. 34,40,959, bringing up the total direct outlay to date to Rs. 2,65,15,300, out of the revised estimate of Rs. 3,61,31,583 for the work. The earthwork of the Main Line Upper (2,562 lakhs cubic feet) has been completed ; while on the Main Line Lower and on the first 35 miles of the Raya Branch little remains to be done. The details of the Nokhar Branch, which now alone remains, have been settled.

The head works, the Head Regulators on the Main Line, Upper and Lower, and on the Raya Branch, together with all buildings on these channels, have been completed. The important embankment, diverting the waters of the Deg nullah in Sharakpur tahsil of Gujránwála, was sanctioned in July and practically completed by the end of the year ; thus making possible the opening of the Main Canal on April 12th, 1912, surplus water being taken down the diversion. Water can also be passed down the upper part of the Raya Branch, where the Satrah nullah can be used as an escape. On the Main Line Lower distributaries 424 lakhs of cubic feet of earthwork have been excavated on 12 of the 13 distributaries so far sanctioned and masonry work is well advanced. On the Raya Branch two distributaries have been completed and work on three more has been started.

Lower Bari Doab Canal.

492. The Lower Bari Doab Canal is in direct continuation of the Upper Chenab Canal, from which it will derive its main supplies. It is designedt to irrigate annually 877,908 acres in the Ganji Bar of the Montgomery and Mulán districts, most of which is Government waste land. The head works are on the Ravi at Balloki in Lahore district, where the cold weather supply of that river is generally inappreciable. The head works consist of a level crossing designed to pass on the Upper Chenab Canal supply, assisted by any water there

may be in the Ravi, but at the same time to discharge down the river the monsoon floods, which are estimated at a maximum at 200,000 cusecs. Construction began in 1907-08. The direct capital outlay in 1911-12 amounted to Rs. 37,46,795, bringing the total direct outlay up to Rs. 1,19,23,123 out of the revised estimate of Rs. 2,16,69,940. As the Ravi runs at Balloki in a very tortuous channel, the head works have been constructed on a promontary within one of the bends, and the river is being led in a diversion over the level crossing by training works up and down stream. These training works cut off three bends of the river—one up and one down stream, and that on which the crossing is built. During the year the upper training works have been completed, and the bulk of the subsequent monsoon flood was successfully passed over the level crossing. The training works downstream have not yet been taken in hand. Generally speaking, up to the end of the financial year under review the head works had been completed, with the exception of the steel superstructure and gates and gearing; the Main Line was completed as regards masonry works, with the exception of three syphons and three bridges, as also was the earthwork, with the exception of the portion crossing the river Ravi and the lengths reserved for jail labour and the mechanical excavators. Earthwork on distributaries was well in hand, and it is confidently expected that the canal will be sufficiently far advanced to enable irrigation to be commenced from the kharif of 1913. In the excavation of the Main Line the hearty co-operation of the Jail Department has been obtained, a gang of 400 men being steadily employed. So far 190 lakhs of cubic feet have been excavated by jail labour, and the quality of the work has been excellent. It was finally decided in June to make the proportion of kharif irrigati n one to one and-a-half rabi. The distributary channels had in consequence to be redesigned, and work on these channels did not begin until November. Labour was, however, plentiful owing to distress in the south-east Punjab and Rájpútána. Special exertions were made to get out the designs of works quickly enough to keep the labour employed.

Following the demarcation of rectangles by the Survey Department referred to in paragraph 258, a level survey over the lines of the rectangles was carried out by the Canal Officers. Accurate maps are now under preparation of the commanded area lying east of Montgomery, upon which the water-course schemes will be designed.

Sutlej Canal survey.

493. Upon the completed survey operations for the Sutlej Canal scheme various alternative projects were submitted informally to the Inspector-General of Irrigation. Further information called for by that officer was collected and recorded during the year, and is now under consideration by the Chief Engineer. **Sutlej Canal Survey.**

Canals in charge of District Officers.

494. During the year the Changarwan Canal in the Dasúya tahsil of Hoshiárpur was included under schedule II of the Punjab Minor Canals Act, (III of 1905). The Najafgarh drain was successfully worked by the Deputy Commissioner of Delhi. The Rangoi Canal, as already explained, has now been transferred from the Irrigation Department to the district board of Hissar. Difficulties have again arisen in regard to the obligation of the Alwar Durbar to take measures to secure to the Gurgaon villages in the Firozpur tahsil their proper share of the floods passing down the Landoha stream. The working of the bunds in Gurgaon and the Sarusti Canal in Karnál was satisfactory. The case of the Shahnahr Canal in Hoshiárpur is being taken up, and a survey as a basis for remodelling and improvement is being carried out by an officer of the Irrigation Department. **Minor Canals Act.**

The working of the Grey Canals during the year can scarcely be regarded as entirely satisfactory. The question of their improvement is complicated by their possible eventual absorption in the Harike weir project. This latter project also affects the eventual destinies of the Kitchin Canal system on the other bank of the Sutlej. The state of the Kitchin Bund Canals has during the year formed the subject of a special reference to Government. Remodelling and alterations are being carried out which may result in a renewal, temporary at any rate, of the extensive irrigation done by the canal in the past.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1911.

Canal Revenue.—(1) Administration Report of the Irrigation Department, Punjab, for the year 1911-12.

(2) Revenue Report of the Irrigation Department, Punjab, for the triennial period 1908-09 to 1910-1911.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1911-12.

Stamps.—Note on the Stamp Statements of the Punjab for the year 1911-12.

Income Tax.—Report on the Income Tax Administration of the Punjab during the year 1911-12.

Forests.—Progress Report of Forest Administration in the Punjab for 1911-12.

Provincial Revenues.—Budget for 1912-13 and Financial Statement, published in the *Punjab Gazette.*

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1911-12.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1911-12.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part III—Commercial Services.

Part IV (*b*)—Finance and Revenue.

Part VIII—Local Funds.

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1911-12.

36.—Gross Revenue and Expenditure.

Gross revenue.

495. The revenue raised in the province and controlled by the Local Government consists of the income of all Civil Departments, except the Railways, Post Office, Telegraph, Opium and Salt Departments. The excise revenue from opium, however, as apart from the recoveries of the cost of Government opium for the Opium Department, is part of the excise revenue of the province, and as such is under the control of the Local Government. The revenue of the Salt and Opium Departments is essentially revenue raised in the province, and is included in this review, in which, on the other hand, the income of the Railways, Post Office and Telegraphs is left out of account. The income of the district boards and municipalities is not incorporated in the public accounts, and will be dealt with separately. As thus explained, the revenue raised in the Punjab amounted in 1911-12 to over eight crores of rupees, of which, under the system of the provincial settlement explained in paragraph 93, practically four crores are credited to the provincial section of the accounts. Of the total sum raised, the proportion recovered under land revenue, including that due to irrigation, was 43·25 per cent. Land revenue assessments, however, only contributed 34½ per cent., as 8¾ per cent. came from other demands classed in the accounts as land revenue. The other principal receipts were irrigation 27·50 per cent., excise 8 per cent, stamps 6·50 per cent., salt 4·50 per cent., income-tax 2 per cent., forest 1·50 per cent.

and miscellaneous 1 per cent. No other head contributed as much as 1 per cent. of the total income :—

Source of Revenue.	1910-11.			1911-12.		
	Total, Rs. 1,000.	*Provincial.*		Total, Rs. 1,000.	*Provincial.*	
		Share.	Amount, Rs. 1,000.		Share.	Amount, Rs. 1,000.
Land Revenue	2,97,81	Three-eighths	1,11,68	3,47,92	Half	1,73,96
Opium	5,49	*Nil*	...	6,23	*Nil*	...
Salt	35,92	*Nil*	...	38,16	*Nil*	...
Stamps	48,92	Half	24,46	52,57	Half	26,29
Excise	56,95	Half	28,47	64,00	Half	32,00
Income tax	15,60	Half	7,50	16,22	Half	8,11
Forest	12,18	Half	6,09	13,10	Whole	13,10
Registration	3,00	Whole	3,00	3,16	Whole	3,16
Tribute	2,77	*Nil*	...	1,48	*Nil*	...
Interest	3,22	Various	2,88	2,93	Various	2,58
Law and Justice—Courts ...	4,36	Whole	4,36	4,35	Whole	4,35
Law and Justice—Jails ...	2,82	Whole	2,82	3,41	Whole	3,41
Police	5,81	Whole	5,81	1,80	Whole	1,80
Education	3,72	Whole	3,72	3,64	Whole	3,64
Irrigation—Major Works ...	1,99,89	Three-eighths	74,96	2,13,08	Half	1,06,54
„ Minor Works ...	9,24	Various	62	7,99	Various	56
Civil Works	5,73	Various	4,97	6,93	Various	6,20
Miscellaneous	11,82	Various	7,89	10,91	Various	9,70
All other heads	6,15	Various	3,94	6,05	Various	3,93
Total ...	7,31,40		2,93,17	8,03,93		3,99,33

The changes in the provincial share shewn for the past year in the above statement and in that given in the following paragraph are due to the new provincial settlement. The receipts under the various principal heads are separately noticed in subsequent paragraphs of this chapter. The increase shewn under opium is due to the increase in the sales of Government opium, which is ousting other descriptions in the market. The decrease under tribute is explained by the permission accorded to the Kapurthala State to pay tribute into the Bahraich treasury of Oudh instead of into the Jullundur treasury as before. Under Irrigation Minor Works the provincial income is that derived from the provincial canals in Shahpur and Montgomery and from petty works in the charge of Deputy Commissioners. The income from the minor canal works, which are classed as Imperial, is wholly Imperial. The expenditure on these minor works also is treated in the same manner. Civil Works again are either provincial, in charge of Deputy Commissioners or departmental officers as the case may be, or Imperial. In the former case the income and expenditure are wholly provincial, and in the latter wholly Imperial. The provincial income under interest is derived from loans to municipalities and under the Land Improvement and Agriculturists Loans Acts and from other miscellaneous loans. Under Miscellaneous the most important item is contributed by the receipts of the copying department, the transactions of which are now being included in the general accounts.

496. The gross Government expenditure, excluding expenditure of the Military, Railways, Post Office and Telegraph Departments and capital expenditure on canals is as follows :— Gross expenditure.

Heads of Expenditure.	1910-11			1911-12.		
	Total, Rs. 1,000.	*Provincial.*		Total, Rs. 1,000.	*Provincial.*	
		Share.	Amount, Rs. 1,000.		Share.	Amount, Rs. 1,000.
Land Revenue	46,81	Whole	46,81	47,76	Whole	47,76
Salt	4,48	*Nil*	...	4,82	*Nil*	...
Stamps	1,63	Half	81	1,77	Half	89
Excise	1,69	Half	84	1,71	Half	86
Income-tax	11	Half	5	11	Half	5
Forests	7,41	Half	3,70	7,64	Whole	7,65
Registration	1,16	Whole	1,16	1,20	Whole	1,20
General Administration ...	14,29	Various	11,33	18,33	Various	13,65
Law and Justice—Courts ...	40,94	Whole	40,94	42,18	Whole	42,18
Law and Justice—Jails ...	11,09	Whole	11,09	12,24	Whole	12,24
Police	56,50	Whole	56,50	58,57	Whole	58,57
Education	22,84	Whole	22,84	23,27	Whole	23,27
Medical	14,20	Whole	14,20	21,20	Whole	21,20
Political	6,13	*Nil*	...	6,29	*Nil*	...
Scientific	7,78	Various	6,66	8,90	Various	7,75
Pensions	17,68	Whole	17,57	18,75	Whole	18,70
Stationery	7,55	Whole	7,55	7,34	Whole	7,18
Irrigation—Major Works ...	1,25,96	Three-eighths	47,24	1,36,42	Half	68,21
„ —Minor Works ...	11,28	Various	81	11,17	Various	1,07
Civil Works	55,71	Various	51,28	67,90	Various	62,70
All other items	14,40	Various	7,75	15,68	Various	7,66
Total ...	4,69,64		3,49,13	5,13,25		4,02,79

The expenditure, not charged to revenue, on Major Irrigation Works amounted to Rs. 1,47,45,000. The various works are detailed in Chapter IV.

37.—Land Revenue.

497. Owing to the circumstance that the agricultural year does not correspond with the financial year, the figures for land revenue receipts given above do not agree with those given in the land revenue report (see paragraph 250). The agricultural year ends on September 30th and the financial year on March 31st following. Thus the total realizations for the past agricultural year are given in the land revenue report as Rs. 3,13,46,000, (ordinary revenue, fixed and fluctuating, Rs 2,88,51,000, other demands Rs. 24,95,000), while for the financial year the treasury figures are Rs. 3,47,92,000 as above. The discrepancy is in the main due to the large increase between September 30th and March 31st in the amount received on account of sales of peasant grants in the Lower Chenab Colony. In practice a calculation is annually made of the amount of land revenue "due to irrigation." The sum arrived at in the case of Major Works is deducted from the income actually shewn in the above accounts under the land revenue head, and is given as a separate item under "Irrigation—Major Works." The sum so calculated is rapidly rising with the extension of canal irrigation and re-assessment of the land revenue demand on the older canals. In 1910-11 it amounted to Rs. 34,62,000 and in 1911-12 to Rs. 58,25,000. With the deduction of this item the land revenue receipts of the latter year as shewn in the general accounts work out to Rs. 2,89,67,000. Two recent changes affect the land revenue receipts. The income from the sale of sites in Colony towns, formerly credited as land revenue, is now treated as "Miscellaneous," and in anticipation of the passing of the Colony Bill the income from rents in Colony village sites has ceased.

38.—Irrigation.

General results.

498. The working expenses of the Major Canals in operation (less refunds, Rs. 22,022) amounted to Rs. 83,56,458, while the direct income from water-rates and miscellaneous receipts was Rs. 2,12,85,938. A further sum is credited to the profit and loss account of the canals as an indirect receipt from land revenue "due to irrigation" amounting to Rs. 58,24,503. This income and expenditure are shared equally by the Provincial and Imperial Governments.

On the Minor Imperial Canals the working expenses (less refunds, Rs. 660) amounted to Rs. 9,41,229. Direct receipts totalled Rs. 7,44,280 and indirect receipts Rs. 8,55,439. The income and expenditure are entirely Imperial.

On the Provincial Canals, the transactions of which are entirely Provincial, working expenses amounted to Rs. 71,810, direct income to Rs. 40,460 and indirect income to Rs. 16,850.

To arrive at the amount due to the Provincial Government to make up the guaranteed minimum of Rs. 41 lakhs, only direct income is taken into account. By the Accountant-General's figures, which differ slightly from the above and include certain petty transactions on works in charge of Deputy Commissioners, the Provincial share of receipts is Rs. 1,07,10,000, of which Rs. 1,06,54,000 are contributed by Major and Rs. 56,000 by Minor Works, and the Provincial share of expenditure is Rs. 69,28,000, of which Rs. 68,21,000 falls under Major and Rs. 1,07,000 under Minor Works. The balance of the guarantee is thus Rs. 3,18,000.

Major Works.

499. On the Western Jumna Canal the charges debited to revenue amounted to Rs. 12,08,454, the increase being due to the construction of silting reaches in swamped areas and to project surveys. The charges include Rs. 89,785 on extensions and improvements and Rs. 5,30,196 on repairs. The direct income realised was Rs. 23,40,359 and the indirect income from land revenue due to irrigation Rs. 2,23,412. The sum payable by the Jind State has been raised for the future from the present figure of Rs. 1,19,644 to Rs. 1,31,000. The seigniorage leviable from Patiála was Rs. 22,597.

On the Sirhind Canal the charges were Rs. 9,96,530, of which Rs. 68,414 were spent on improvements and Rs. 3,36,111 on maintenance. The direct income realised was Rs. 30,57,629, a large increase on the figures for the previous year, due to the increase in area irrigated. There is no indirect income on this canal. The above figures are exclusive of the expenditure and income on the Native States Branches, for which separate accounts are kept.

On the Upper Bari Doab Canal the charges were Rs. 17,11,520, a large increase, incurred chiefly on manufacture at the Central Workshop, but high figures are given under extensions, Rs. 2,29,460, and maintenance, Rs. 7,74,490. The direct income realized was Rs. 38,29,707, and Rs. 3,26,150 were collected as land revenue due to irrigation.

On the Lower Chenab Canal the charges for the year amounted to Rs. 24,88,522, including Rs. 1,74,416 on extensions and improvements and Rs. 12,01,926 on maintenance and repairs. The direct income realised was Rs. 86,24,200 and the indirect income Rs. 41,42,468. The inclusion of owner's rate in the new enhanced land revenue rates on this canal have reduced the direct income, but the increase in the indirect income from the increase in land revenue rates and the abolition of remissions for ordinary failure far more than covers this decrease.

On the Lower Jhelum Canal the charges amounted to Rs. 10,52,142, including Rs. 2,33,149 on extensions and improvements and Rs. 3,28,139 on maintenance chiefly on special training works in the Jhelum below Rasul, where the state of the river had been unsatisfactory. The direct income realised is Rs. 22,76,097 and the indirect Rs. 4,87,614. The heavy remissions on account of boll-worm ravages in the cotton crop have adversely affected collections.

Expenditure on the Upper Sutlej Canals amounted to Rs. 3,39,381, of which Rs. 1,84,308 were spent on maintenance and repairs: a new head reach on the Upper Sohag having been necessary. The income from direct receipts was Rs. 3,81,955 and from land revenue Rs. 2,18,223.

Expenditure on the Sidhnai Canals debited to revenue amounted to Rs. 1,42,546, mainly on establishment. The income from direct receipts was Rs. 5,00,009 and from land revenue Rs. 1,48,357.

The working expenses of the Indus Inundation Canals amounted to Rs. 4,17,363, over Rs. 2½ lakhs less than in the previous year. Smaller amounts were spent on extensions (Rs. 72,117) and on maintenance (Rs. 2,54,448). Beyond the annual repairs and silt clearance little was done during the year. The direct income rose by over Rs. 1 lakh to Rs. 2,75,982 and the indirect income from land revenue was higher at Rs. 2,78,279.

500. The expenditure on the Shahpur Canals was Rs. 67,612, heavy silt clearance being necessitated by the river breaching the Sahiwal Canal. The direct receipts were Rs. 54,178 and the indirect Rs. 12,656; both were adversely affected by the shortage of the canal supply. Imperial Minor Works.

The working expenses on the Ghaggar Canals amounted to Rs. 30,171. The direct receipts were Rs. 16,223. There are no indirect receipts on this system.

On the Lower Sutlej Canals expenditure reached the high figure of Rs. 3,43,003, of which Rs. 95,878 were spent on improvements and Rs. 1,42,542 on repairs. The benefit of the expenditure will be felt in coming seasons. Diversions were required for the Sardarwah and Mailsi Canals, which were threatened by the river. The canals realised Rs. 2,47,962 in direct income and Rs. 2,51,750 from land revenue. The income is, owing to the shortage of supplies, slightly below normal.

The working expenses of the Chenab Inundation Canals amounted to Rs. 1,66,017, of which Rs. 50,925 went on improvements and Rs. 64,518 on maintenance. Except for silt clearance, little expenditure was incurred. The direct income amounted to Rs. 1,68,192 and the indirect to Rs. 2,14,817.

The working expenses of the Muzaffargarh Canals amounted to Rs. 3,34,426 only, of which Rs. 41,538 were spent on improvements and Rs. 1,64,927 on maintenance. The figures for the previous year had been over Rs. 1 lakh higher. Silt clearance and the provision of working heads absorbed most of the expenditure. Direct receipts aggregated Rs. 2,57,725 and indirect receipts Rs. 3,76,216, the figures being in each case less than in the previous year.

Provincial Canals.

501. On the Shahpur Canals working expenses amounted to Rs. 48,783, chiefly on silt clearance. Direct receipts were Rs. 31,534 and indirect Rs. 6,284. On the Ravi Canals the expenditure was Rs. 23,027,—the direct receipts Rs. 8,926 and the indirect receipts Rs. 10,566.

Rangoi Canal.

502. Rupees 9,391 were spent on overhauling the Rangoi Canal before handing it over to the Hissar District Board. There were no receipts on this canal.

39.—Opium and Excise.

General.

503. Interest in the Excise administration in this Province since 1906 has chiefly centred in the carrying out of the various reforms advocated by the Excise Committee, and enjoined by the subsequent resolutions of the Government of India. The year 1911-12 accordingly was not marked by any radical changes. Steady progress on well-established lines has been the order of the day. The new Excise Bill, upon the preparation of which much care has been spent, has been administratively approved by the Government of India. One of the chief needs is the enhancement of the penalties that may be inflicted for the more serious offences. At present the Excise administration is undoubtedly handicapped by the inadequacy of the penalties prescribed and by the misplaced leniency of many Magistrates and Judges, who are reluctant to inflict even the moderate sentences which the law allows.

Gross revenue.

504. The gross income rose from rather over 57 lakhs to over 63½ lakhs, a growth which, though less than the enormous increase of 13¾ lakhs recorded for 1910-11, is sufficiently great to attract attention. The rise in Excise revenue in 1911-12, however, in so far as it is not produced by higher rates of taxation, is not due solely or even principally to increased consumption, but to the enhanced fees which result from keenness of competition and a more widespread knowledge of the profits of the trade and the methods by which such profits can be secured. What the increase has been in the past 30 years is evident from the following table :—

Source of revenue.	1881-82.	1891-92.	1901-02.	1911-12.
	Rs.	Rs.	Rs.	Rs.
Spirits	6,91,360	11,61,970	16,29,324	42,65,601
Beer	...	11,430	1,21,572	2,87,950
Drugs other than opium	1,37,560	1,57,300	2,84,130	7,02,271
Opium	3,63,510	4,14,280	5,90,345	11,04,299
Miscellaneous	...	...	800	1,479
Total ...	11,92,430	17,44,980	25,04,599	63,61,600

The figures for 1881-82 and 1891-92 include the districts of the North-West Frontier Province. The treasury figures for 1911-12 are larger than those given above, as advance collections for future years are shown in the departmental returns as income of the year to which they relate.

505. Exclusive of the cost of establishment in the Financial Commissioners' office, of which no estimate is made, the total expenditure amounts to Rs. 1,76,586, or about $2\frac{3}{4}$ per cent. of the gross collections. This figure includes Rs. 5,915 for refunds which are not shown as an Excise charge in the treasury accounts. In 1901-02 the expenditure, inclusive of the cost of the office of the Commissioner of Excise, was Rs. 82,667. **Gross expenditure.**

506. The special arrangements in Kángra have been discontinued and, with the exception of Kulu, the supply and vend of liquor is now uniform throughout the province. The imports from the Rosa distillery in the United Provinces continue to show a decline, but the establishment of an up-to-date distillery in Patiála will affect the Punjab establishments. The total outturn of the five distilleries in the province shewed a slight decline during the year. The duty paid on issues to the Punjab and North-West Frontier Province shewed an increase of over Rs. $1\frac{3}{4}$ lakhs, due in some measure to the Excise staff posted to distilleries. In this direction the increase in expenditure on the collecting staff has been completely justified. The distilleries are fully equipped with up-to-date plant, and there has been no obstacle to their satisfactory working. **Country spirits.**

507. The increased consumption amounted to 11,000 gallons only, and nearly the whole can be accounted for by the figures of the Delhi district, due no doubt to the influx of visitors to the Durbar. The totals include "special" or "spiced" spirit excised at Rs. 5 a gallon, which shows a large increase. It is a moot point whether this liquor is displacing foreign liquor or plain country spirit; but, in view of the fact that the sales of plain spirit are diminishing and that bazar licenses of foreign spirits show increased sales, it is not probable that the latter are affected. The special spirit is country spirit coloured, flavoured and bottled in capsuled bottles with attractive labels. Its sale at a price higher than that of plain spirit shows that the article is considered superior and is preferred by those who can afford it. **Consumption.**

508. The sum realised from license fees for wholesale and retail vend was rather under Rs. 16 lakhs, an increase of 30 per cent. The increase is extraordinary compared with the moderate increase in consumption. Apart from increased knowledge of the methods by which the profits of the trade can be secured, the introduction of "special" spirits has been the chief factor in this result. The Financial Commissioner is of opinion that these extra license fees would disappear were Government to differentiate such liquor in the still-head duty scale, as has been proposed by some officers. Far more evidence than is at present forthcoming of fraud upon the consumer and injury to the licensees who sell imported and "foreign" spirit, would be necessary to justify a different rate of duty on such spirit. Should such special or spiced spirit entirely displace plain spirit in the public taste, there would be a gain to the administration if as a consequence there were a diminished demand for the product of the illicit still. **Vend.**

In consequence of the keen competition among distillers, the wholesale price of plain and coloured spirit fell one or two annas a gallon; in Amritsar as much as two-and-a-half annas. Retail prices, on the other hand, were inclined to rise, as licensees were anxious to make their profits cover the high auction fees.

509. The total income from country spirits was Rs. 40,69,994, an increase of some Rs. 5 lakhs. The proportion of the taxation, which is derived from license fees, exhibits a gradual increase, and now stands at 41 per cent. In itself this points to the desirability of raising the still-head duty, but the main consideration in this connection is the problem of illicit distillation. **Results.**

510. The features of the year were the increase due to the Durbar of wholesale licenses under which, however, a decreased quantity of spirits was sold. Retail shop licenses, both those on fixed fees and those put up to auction, were reduced. The income shows an appreciable increase from Rs. 1,87,059 to Rs. 1,92,095, chiefly under auctioned bazar licenses. **Foreign spirits.**

Breweries.

511. A modified system of brewery control by the Excise staff is under consideration, which will render possible the levy of duty on manufacture instead of on issues. Sales of beer are recorded in retail foreign liquor shops, and indicate that the taste for beer is decidedly on the increase, though confined at present to large cities and cantonments. Reports from country districts, however, such as Gurdáspur, Lyallpur and Ferozepore, indicate the desirability of at least testing by experiment whether the rural population is prepared to substitute the more innocuous malt liquor for cane spirit. As an experiment in Ferozepore 12 country liquor shops have been licensed to sell beer also and 4 shops to sell beer only, and the Financial Commissioner is considering whether the facilities for sale should not be more widely extended.

Opium taxation.

512. The acreage rate in Kulu has recently been raised, and is estimated to have fallen on actual cultivation at Rs. 13 per acre. The unit of assessment has now been reduced to $\frac{1}{8}$ of an acre, and the incidence will approximate more nearly to the prescribed rate per acre of Rs. 9. The produce from Simla has now to pass through the ware-house in Kot Khai, where it is subjected to a further transport duty of Rs. 2 a seer.

Malwa opium.

The issue price of Excise opium has been raised to Rs. 20 per seer in the districts marching with the United Provinces and to Rs. 18 elsewhere. The increase is in "duty" only as the share taken by the opium agency has not been altered.

The duty on Hill States' opium was raised to Rs. 3 per seer and on Afghánistán imports to Rs. 8 per seer. These increases were followed by decreased imports in each case.

Vend.

513. Realizations on account of license fees for vend of opium fell by practically Rs. 50,000. The decrease is fully accounted for by the rise in duty on all kinds of opium and by the prohibition of boiling before sale introduced on April 1st, 1911.

The retail price of excise opium is about Rs. 26 a seer. Simla, Kulu and Hill States' opium sells at about Rs. 32 a seer and Afghan opium at Rs. 40 a seer. The substantial differences in the price of the three varieties of the drug indicate a corresponding gradation of quality in public estimation.

Consumption.

514. The total consumption, estimated at 63,541 seers, shows a slight increase, but it is Excise opium that is gaining ground. The prohibition of boiling (in which, however, the Native States have not yet joined) has made it impossible to sell other varieties as refined Excise opium. The various enhancements of duty on opium other than Excise opium have had the effect of maintaining a favourable market for Excise opium.

Results.

515. The total receipts on account of opium were Rs. 11,04,999 as against Rs. 10,68,939 in 1910-11. The raising of duty has had the very desirable effect of reducing the percentage of taxation (now 49 per cent.) borne by vend-fees. Comparison with the similar figure in the case of liquor shows that there is still a very large margin for the increase of opium duty.

Hemp drugs.

516. The duty paid on charas was increased by Rs. 2 to Rs. 10 from April 1st, 1911. The advisability of a further enhancement is under consideration. Consumption showed a considerable decline, and popular opinion appears to be opposed to the use of this pernicious drug. The consumption of bhang in the Multán division, which accounts for nearly half the provincial consumption, showed a large increase ascribed to the visits of Sadhus.

Cocaine.

517. The number of cocaine licenses was cut down from 97 to 74, and sales under license were greatly reduced; but in face of the large and growing illicit trade such control of sales is of little effect. The votaries of the drug are chiefly strangers from other provinces and residents of Delhi.

Results.

518. Income from drugs other than opium rose from Rs. 6,69,729 to Rs. 7,02,271, a large increase in license fees for sale of charas and bhang being accounted for by the circumstance that licensees had taken the precaution of

accumulating stocks of charas at the old rate of duty. Prices, however, did not begin to rise until towards the end of the year.

519. The number of Excise offences and of convictions shows a considerable increase, but illicit distillation is very prevalent in the cane-growing districts of the Central Punjab. Public opinion, however, is setting against the drink habit, and a temperance society numbering influential Sikh members has been formed at Lyallpur. With public opinion favourable, the time seems to have come for a determined effort to put a stop to smuggling and illicit distillation. Excise offences.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

520. From January 1st, 1912, rates of payment to miners at the Mayo Mine, Khewrah (Jhelum), ranging, according to level below storage stations, from 1 anna to 1 anna 3 pies per cubic foot, were introduced instead of the previous uniform rate of 1 anna: deductions for marl were also abolished: consequently the cost per 100 maunds rose from Rs. 4-7-5·14 to Rs. 4-10-7, and the average outturn per hundred cubic feet decreased from 140 to 139·16 maunds. From February 1st, 1912, the rates paid at the Nurpur and Warcha mines were raised from Rs. 4 to Rs. 5-8-0 per 100 maunds, and at the Kálábágh (Miánwáli) quarries from Rs. 4-6-10 to Rs. 6-4-0. At these three works the miners are paid on the quantity of salt actually cleared by the trade, and not, as at the Mayo Mine, on the cubic area excavated. The quantity of salt excavated was 3,639,504 maunds, the amount sold 3,491,999 maunds, and the stock balance, almost entirely at the Mayo Mine, rose from 304,192 maunds to 451,697 maunds. Excavation.

521. The sales were—at the Mayo Mine 3,002,541 maunds; Warcha 158,592, Núrpur 4,702 and Kálábágh 326,164 maunds. Owing to the increase in wages the sale price of salt at the last three places was increased from February 1st, 1912, from 10 pies to one anna a maund. A further enhancement throughout the division to one anna two pies was effected from April 1st, 1912. On the figures for the year the sale price realised, Rs. 2,29,756, was Rs. 6,148 less than the cost price of the salt, Rs. 2,35,904. Since April 1st, 1894, the total loss under this head has aggregated Rs. 4,27,723, or 1·74 pies a maund. Sales.

522. Through traffic sales formed 93·44 per cent. of the total rail-borne trade of the division. The work connected with clearances for the through traffic was carried out departmentally, and the average cost of clearance was Rs. 1-6-11 per hundred maunds. The uncleared balance was 53,202 maunds. The receipts for clearance fell short of the expenditure, including postage and leave and pensionary charges, of Rs. 46,724 by Rs. 331. On the result of the last 18 years, however, the gain to Government has been Rs. 3,03,934. Through traffic salt.

523. A low level tunnel to facilitate the bringing out of salt from the low level workings at the Mayo Mine was driven 437·7 feet at a cost of Rs. 13,979-14-5 out of a total length of 5,517 feet. In the Mári Hill near Kálábágh an exploration drift of 451 feet was worked at a cost of Rs. 2,250. General.

The total receipts of the division were Rs. 37,69,500 and the total charges Rs. 3,86,794. The distribution of the salt of this division is to the Punjab and Native States 71 per cent., to the United Provinces 17 per cent., to Behar 5 per cent., to Kashmir 3 per cent., to Sind 2 per cent., and to the North-West Frontier Province 2 per cent.

Mandi Mines.

524. The sales from the Mandi mines at Guma and Drang were 110,080 maunds. There was a shortage of supply at Drang owing to landslips. The realizations are divided by the British Government, which takes $\frac{2}{3}$rds of the Mandi.

duty of 3 annas a maund, and the Raja of Mandi, who takes $\frac{1}{3}$rd of the duty and the whole of the price. The price was $10\frac{1}{2}$ annas throughout the year. The British share of the duty was Rs. 13,760 and expenditure, on inspection, Rs. 4,946. The whole of the Mandi salt is consumed in the Province and the Native States, about half going to the Kángra district.

Sultanpur Salt Works.

Sultanpur.

525. At the Sultánpur Salt works in Gurgaon district the salt is produced by licensed manufacturers by evaporation from well brine. Seventeen factories only were worked, and though sales increased during the year the industry is on the decline. The salt manufactured was 35,334 maunds; 31,914 were sold and stocks were increased from 2,155 maunds to 5,575 maunds. The salt is sold by the refiners at varying rates ranging from 3 to 8 annas a maund, and the average price was 4·56 annas. The United Provinces takes 88 per cent. of this salt and the Punjab the balance. The total receipts amounted to Rs. 32,364, including Rs. 498 on account of the Hakimi cess, 3 pies a maund, the proprietary share of Government in the produce, and the total charges were Rs. 10,512.

Internal Branch.

Saltpetre.

526. In the Internal Branch 27 licenses for saltpetre refineries and 1,394 for the manufacture of crude saltpetre were issued. The fees for the former are Rs. 50 each and for the latter Rs. 2 and realised Rs. 4,138. At these works 47 maunds of salt and 6,839 maunds of sitta (impure saltpetre salt) were excised apparently to Rs. 47 and Rs. 3,419, respectively. Out of 198,728 maunds of saltpetre utilised for refinement, 71,953 maunds of refined saltpetre were produced.

General.

Financial Results.

527. Exclusive of the operations of the Internal Branch, complete provincial figures for which are not published, the transactions in the Punjab of the department were as follows:—

Source.	*Receipts.*	*Charges.*	*Nett.*
	Rs.	Rs.	Rs.
Cis-Indus	37,69,500	3,86,794	33,82,706
Mandi	13,760	4,946	8,814
Sultánpur	32,364	10,512	21,852
Amount paid to Baháwalpur	...	80,000	— 80,000
Total ...	38,15,624	4,82,252	33,33,372

The payment to Baháwalpur is under agreement by which the Durbar undertakes to prevent the manufacture of salt within the State.

Supply and price.

528. The average supply of salt per head of the population in the Punjab is worked out by the department on the average of the three years 1909-10 to 1911-12 at 9·04 lbs. per annum.

The rate of duty, Re. 1 a maund, ordered on 20th March 1907 remained unchanged. Mandi salt, however, pays a special rate of 3 annas. The wholesale price of Cis-Indus salt ascertained by officers of the department in seven selected centres varies from Re. 1-6-9 per maund in Lahore to Re. 1-11-8 at Delhi. Retail prices recorded by the statistical bureau for ten centres ranged from Re. 1-8-2 at Amritsar to Re. 1-13-1 per maund at Delhi. The average of these retail prices showed a rise of 1 pie per maund over the figures of the previous year.

Departmental.

529. The Punjab border adjoining Bikáner was patrolled to ascertain whether any salt made in the State found its way into British territory. The result showed that the arrangements made by the Durbar were effective. Departmental changes affecting the Punjab made during the year were the

increase of the local allowance of the Manager, Mayo Mine, from Rs. 100 to Rs. 150 : the grant of a local allowance of Rs. 100 to the Superintendent, Warthganj Depôt, Khewrah, and the increase of the local allowance of the Inspector, Punjab Circle Internal Branch, from Rs. 20 to Rs. 50.

41.—Stamp Revenue.

General.

530. The steady expansion of receipts under the Court Fees and Stamp Acts, which has been characteristic of the past decade, continued during 1911-12. The gross receipts amounted to Rs. 52,61,711, an increase of Rs. 3,65,518. The total charges, inclusive of cost of stamps and plain paper, aggregated Rs. 2,47,123, an increase of Rs. 8,039 in discount on sales and cost of stamps. In the treasury accounts refunds aggregating some Rs. 72,000 are not shown as a charge against the stamp head. This practice accounts for the difference between the departmental and treasury figures for charges.

Court-fee Stamps.

531. Twenty-two districts show an increase in the income from court-fee stamps, the largest increases being in Lahore, Lyallpur and Delhi. Of the seven districts which show decreases, Hissar heads the list with Rs. 10,558. The net result for the province is an increase of Rs. 1,75,507 on a total income of Rs. 33,15,995 realized by the sale of court-fee stamps. The increase in Lahore is attributed to applications for grant of probate and letters of administration in estates of large value ; in Lyallpur, to an increase in the number and value of suits ; and in Delhi, to the institution of a number of suits for ejectment of tenants from houses in the city on the occasion of the Durbar. The decrease in Hissar is said to be due to the fact that the institution of civil suits during the previous year was abnormal.

Non-judicial stamps.

532. The income from non-judicial stamps was Rs. 18,69,239, being an increase of Rs. 1,84,846 on the figures for the preceding year. Of this, Rs. 1,07,553 was under non-judicial impressed stamps, spread over 24 districts. The largest increases were in Delhi, attributed to business connected with the Durbar ; Lahore, ascribed to commercial prosperity ; Amritsar, said to be due chiefly to an increase in the value of immoveable property ; Gujránwála, the only explanation given is the obvious one that a larger number of deeds was registered ; in Muzaffargarh the increase is attributed to an expansion of banking business, and in Lyallpur to the registration of sales and mortgages on the acquisition of proprietary rights.

The income from the sale of *Hundis* rose from Rs. 69,189 to Rs. 74,729, being an increase of Rs. 5,540. This is due generally to the expansion of banking business in the larger towns, but in Amritsar it is attributed to an increase in borrowing, consequent on the bad *kharif* harvest.

There was also an increase of Rs. 59,469 in the income from impressed labels or special adhesive labels, due to the enormous development of business connected with Insurance Companies and Marriage and Relief Funds. It may be noted, however, that there has been a considerable decrease in the number of documents presented for stamping on behalf of such associations since the introduction of recent legislation for their regulation.

Insufficiently stamped documents.

533. The number of insufficiently stamped or unstamped documents dealt with was 2,238 and the amount of duty and penalty realized was Rs. 22,121.

42.—Assessed Taxes.

General.

534. Gross collections rose from Rs. 15,60,784 to Rs. 16,21,063, but a normal sum of Rs. 9,900 was refunded in the year. To the increase of Rs. 60,000 the chief contributions were the tax on profits of companies (Rs. 5,000) and the tax on "other sources" (Rs. 41,000). The assessment for 1911-12 depended for the most part on the course of trade during 1910-11. The harvests for that year were good, and the grain trade in Lyallpur, Delhi and other centres was very profitable, prices having risen after the grain had reached the

markets. Cotton prices reached a record level. Exclusive of refunds the cost of collection amounted to Rs. 11,325 only. Increased attention has been given to the important matter of the preliminary assessment. The Commissioner of Ráwalpindi has issued special instructions on the subject, and District Officers generally are alive to the necessity of systematizing the information on which the subordinate officers, to whom the work of preliminary assessment is entrusted, must rely for a satisfactory performance of their duties.

Special enquiries.

535. On the suggestion of Government special enquiries are being made in Lahore, Multán and Lyallpur. These enquiries might probably be extended with advantage to other centres. The Deputy Commissioner of Ambala, for instance, suggests the necessity for a special enquiry in that district, and possibly the assessment of the Jhelum Colony might receive scrutiny with advantage.

Under the orders of Government, enquiries have been made to ascertain to what extent the tax on large incomes earned in the Punjab is paid in other provinces. The results were unsatisfactory. In the case of the largest firms no information was forthcoming as to the amount of income earned in the Punjab as distinct from that earned in other provinces. The Financial Commissioner, however, hopes that some information may be forthcoming from the special enquiries now being made in connection with the assessments of Lyallpur and Multán.

43.—Forest Revenue.

Income and expenditure.

536. The total revenue of the forest year was Rs. 10,58,210 and the expenditure Rs. 7,79,805, yielding a cash surplus of Rs. 2,78,405. The details are—

Revenue.		Rs.	Expenditure.		Rs.
I—Timber removed by Government agency	...	2,24,243	A—Conservancy and Works	...	3,20,312
II—Timber removed by consumers	...	6,80,589	B—Establishments	...	4,59,493
III—Drift, etc.	...	52,293			
IV—Forests not managed by Government	...	5,655			
V—Miscellaneous	...	95,430			
Total	...	10,58,210	Total	...	7,79,805

The income shews a considerable decrease on the previous year's figures, explained chiefly by overstocked markets and consequent slack demand for fuel. The expenditure has at the same time slightly increased owing to the introduction of a time scale of pay for the provincial service, to the extension of resin operations and to buildings. The cash surplus compares unfavourably with that of the last and previous years, but the figures are to some extent misleading, as a large amount of the income of the year has for various reasons not come into the year's accounts. Making the necessary adjustments the real surplus is calculated to be Rs. 4,34,372.

The net result of the year's working is as follows :—

	Rs.
Cash surplus	2,78,405
Increase in value of stock	1,49,933
Increase in value of live and dead stock	20,281
Increase in outstandings against contractors and disbursers	16,867
Total ...	4,65,486
Deduct—	
Decrease in outstandings of revenue	5,090
Net result in favour of the year	4,60,396

The forest year ends on June 30th, and in consequence the departmental annual figures of receipts and expenditure differ widely from those of the treasury returns for the financial year given in paragraphs 495 and 496 above.

44.—Provincial Revenues.

537. The income and expenditure under the provincial section of the accounts in the last two years are is as follows:— Income and expenditure.

	1910-11. Rs. 1,000.	1911-12. Rs. 1,000.
Opening balance	27,76	69,75
Income	2,93,17	3,99,33
Assignments from Imperial to Provincial ...	97,95	37,77
Total ...	4,18,88	5,06,85
Expenditure	3,49,13	4,02,79
Closing balance	69,75	1,04,06

No true comparison can be drawn between these gross figures because the totals both of receipts and charges have been greatly increased in 1911-12 by the changes in the Provincial Settlement, the effect of which is shown in the following paragraph.

The details of income and expenditure are given in the statements in paragraphs 495 and 496, from which it will be seen that the province has shared in the increased income which has been obtained from Land Revenue, Stamps and Excise already noticed. The decrease under police is due to the cessation of contributions from municipalities, which have been relieved from police charges. The Local Government receives instead a compensatory assignment from the Government of India. Practically all heads show an increase in expenditure.

The balance of Rs. 1,04,06,000 at the close of 1911-12 included an aggregate of Rs. 38,24,000, being unspent balances of Imperial assignments for specific purposes, so that the true provincial balance was Rs. 65,82,000 against the prescribed minimum of Rs. 10 lakhs.

538. The revision of the provincial settlement has been referred to in paragraph 93. On the actual figures for 1911-12 the result to the Provincial Government has been as follows:— Effect of recent changes.

Head.	Account.	Amount shared.	Provincial share.		Effect of new Settlement.
		Rs. 1,000.	According to old Settlement Rs. 1,000.	According to new Settlement Rs. 1,000.	Rs. 1,000.
		Rs.	Rs.	Rs.	Rs.
Land Revenue ...	Income	3,47,92	1,30,47	1,73,96	+43,49
Forest	Income	13,10	6,55	13,10	+6,55
Irrigation ...	Surplus	75,64	28,24	37,82	+9,58
	Balance of guarantee ...	...	2,51	3,18	+67
Land Revenue ..	Refunds and Compensations.	115	45	58	−13
Forest	Expenditure ...	7,68	3,84	7,68	−3,84
Nett additional income					+56,32
Fixed assignments abolished					−46,29
Nett result to Provincial finances ... ... Rs. 10,03,000 ...					10,03

Upwards of 7 lakhs of the above nett gain is due to abnormal receipts from sales of land in the Canal Colonies, which are of the nature of capital.

Over a lakh is contributed by the forest surplus, and the remainder is on account of ordinary revenue, partly from collection of arrears and partly from enhanced assessments.

Assignments.

539. The assignment in 1911-12 of Rs. 37,77,000 includes —

	Rs.
(*a*) Fixed adjusting assignment under the new settlement ...	6,77,000
(*b*) To compensate for loss of revenue	15,06,000
(*c*) For specific expenditure ...	16,17,000
Total ...	38,00,000

against which is set off a recovery of Rs. 23,000 due to the altered classification in the expenditure on the Public Works section of the Accountant-General's office.

45.—Local Funds.

General.

540. The gross income of district boards has risen from Rs. 51,87,000 to Rs. 53,74,000. To this income Government contributed Rs. 4,28,000 under Education, Rs. 49,000 under Medical, Rs. 1,05,000 under Scientific Departments and Rs. 7,75,000 for Public Works : Rs. 13,57,000 in all. The incidence of taxation per head of population was 2 annas 5 pies. The total expenditure was Rs. 53,84,000 as against Rs. 49,35,000 in 1910-11.

Local rate.

541. From the local rate, which is the chief source of the income of the boards, the amount obtained was Rs. 27,55,000, which is Rs. 41,000 in advance of the recoveries of the previous year.

A number of boards still complain of lack of adequate means to discharge their obligations, and in consequence have been obliged to apply for an enhancement of the local rate. This has been already done in Ferozepore and two tahsils of Muzaffargarh, whilst similar proposals are being put forward by the Jullundur, Ludhiána, Kángra and Lahore boards. Such proposals are readily sanctioned, as the slight increase in the cess is hardly felt by the land-holders, and when the proceeds are judiciously applied, especially for the improvement of communications, the expenditure brings in an ample return to the land-holder by enabling him both to secure a better price for the produce of the land and to obtain imported articles at a lower cost. The readiness of the boards to vote for raising the local rate indicates that the members are satisfied that there is further room for useful expenditure, and justifies the Government in supplementing the resources of the boards with grants from general revenues.

Education.

542. There has been another marked increase in receipts under the head "Education," which have risen from Rs. 6,53,315 to Rs. 6,82,400. The figures for the year 1909-10 were Rs. 6,14,000. The chief cause of the increase has been the raising of fees. Expenditure has more than kept pace with the receipts, amounting to Rs. 10,63,418 as against Rs. 10,14,227 last year. The increase is due largely to revision of the scale of teachers' salaries and to the establishment of training classes for teachers in several districts. In spite of the large increase in expenditure many districts report that they cannot cope with the rapid rise in attendance which has occurred during the year.

Medical.

543. Receipts under the head "Medical" rose from Rs. 1,20,422 to Rs. 1,25,199, the increase being mainly due to subscriptions. Expenditure dropped from Rs. 6,05,223 to Rs. 5,85,423, the decrease being caused by the absence of large plague preventive operations except in the Delhi division, where special measures were undertaken on account of the Delhi Durbar.

544. Receipts from Veterinary Hospitals have risen from Rs. 5,851 to Rs. 7,906, expenditure rising at the same time from Rs. 45,637 to Rs. 56,825. The increased attention which is being paid to horse and cattle breeding by the boards is reflected in the increase of expenditure on stallions and bulls from Rs. 96,633 to Rs. 1,03,312. **Veterinary.**

545. Expenditure under Civil Works also shows an increase, having risen from Rs. 19,18,099 to Rs. 22,40,441. Of this sum Rs. 9,41,220 has been devoted to communications, of which Rs. 2,18,984 have been spent on the construction of new roads and Rs. 7,22,236 on the maintenance of existing roads. The increase under this head is satisfactory. Communications, however, are far from good, and few district boards are able either to construct the roads required or maintain those existing in even a moderate state of repair. This is due not only to a lack of funds, but also to the difficulty of procuring competent and honest engineers. Government hopes to be able to devolve more ordinary works on to the district boards establishments on the usual terms of payment, and this should enable them to keep up more efficient establishments. **Communications.**

546. The expenditure on arboriculture has dropped from Rs. 2,00,758 to Rs. 1,89,153. The decrease may have been caused by the partial failure of the monsoon. No district has succeeded in making arboriculture pay, and in many the deficiency is considerable. It is generally admitted that there is room for improvement, and that the income from the sale of roadside trees ought to be much larger. **Arboriculture.**

547. Balances fell below the minimum in Gujrát only, and the financial position of this board appears far from satisfactory. Surplus balances were high in the districts of Rohtak, Karnál, Multán and Lyallpur. **Balances.**

46.—Municipal Funds.

548. The aggregate income of the municipalities in the province rose from Rs. 63,93,000 in 1910-11 to Rs. 71,41,000 in 1911-12, octroi furnishing Rs. 39,66,000 out of a total income from taxation of Rs. 44,90,000. The increase was due partly to greater octroi collections consequent on the better supervision of the collecting staff and working of the Municipal Account Code and partly to better receipts under the head "Rents of lands, houses, &c," in Delhi and Lahore, in the former owing particularly to the receipts from stands erected to view the State Entry of their Imperial Majesties. The taxation per head of population is Rs. 2-10-2 per annum in municipalities and Re. 0-6-6 in notified areas. Increased Government grants also contributed to the rise in receipts. Special grants were given during the year to Delhi for the reclamation of the Bela and the improvement of the sanitary condition of the city, to the Amritsar municipality for the filling up of *dhabs* which are the source of malaria in the town and suburbs, and to the Lahore municipality towards the additional supply of wells. Municipalities have also been relieved of police charges aggregating about Rs. 5,19,000, or, including the amount of Rs. 67,767 already remitted four years ago to the Lahore municipality, about Rs. 5,87,000. As it has been found necessary for the sake of efficiency to keep police establishments under the orders of the Police Department and the municipalities have in consequence practically no control over them, Government decided to assume all liability for the charges from the 1st April 1911. **Income.**

549. The expenditure has risen from Rs. 63,85,000 in 1910-11 to Rs. 69,09,000 in 1911-12. The increase mainly occurs under the heads "Miscellaneous and Water-supply." There is a decrease of over Rs. 60,000 in expenditure under "Schools and Colleges." This decrease is unsatisfactory because now that they have been relieved of police charges, municipalities can no longer plead poverty as an excuse for restricting expenditure on education. The proportion of expenditure devoted to Administration and Collection was 11 per cent., Public Safety 6 per cent., Public Health and Convenience (including **Expenditure.**

Public Works 14 per cent.) 58 per cent., Public Instruction 8 per cent., Contributions for General Purposes 2 per cent., Miscellaneous 9 per cent., Extraordinary and Debt 6 per cent. The expenditure on water-supply and drainage, however, includes a large capital outlay in addition to the expenditure on general public works.

Balances.

550. Closing balances show an improvement of over 2 lakhs. The figures in 1910-11 stood at Rs. 16,24,000 and in 1911-12 at Rs. 18,57,000. All municipalities and notified areas close with good balances except the municipalities of Rahon (Jullundur), Batála (Gurdáspur) and Ráwalpindi and the notified areas of Aláwalpur (Jullundur), Kalanaur, Sujánpur and Srigovindpur (Gurdáspur), Háfizabad (Gujránwála) and Chakwál (Jhelum), which failed to maintain the required minimum. Three of the latter have since ceased to be notified areas.

Several municipalities have unduly large balances. The maintenance of balances largely in excess of the requisite minimum is certainly not sound finance, except in cases where, as in several of the municipal towns in the Delhi division, the balances have been accumulated for the purpose of financing specific schemes of improvement.

Accounts.

551. On the whole, the accounts of the municipalities and notified areas show gradual improvement, the credit of which is mainly due to the careful audit of the Local Fund Auditors.

Loans.

552. No new loans were taken by the municipalities during the year. After the close of the year, however, the Delhi municipality took a loan of Rs. 5½ lakhs for the extension of the water-works.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census.—Report on the Census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishan Kaul, C.I.E.

Births and Deaths.—
Sanitation.— } Report on the Sanitary Administration of the Punjab and Proceedings of the Sanitary Board for the year 1911.

Emigration.—Census Report, as above.

Medical Relief.—
- Notes on the Annual Statements of the Dispensaries and Charitable Institutions of the Punjab for the year 1911.
- Report of the Pasteur Institute, Kasauli, for the year 1911.
- Report on the working of the Punjab Lunatic Asylum for the year 1911.

Vaccination.—Notes on Vaccination in the Punjab for the year 1910-11.

PUBLICATION OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part V, Area, Population and Public Health.

47.—DETAILS OF CENSUS.

GENERAL CENSUS OF 10TH MARCH 1911.

553. The first reliable Census of the Punjab was taken on the 1st January 1855. At that time the Delhi territory was not included in the Province. The population of the tract in question had, however, been enumerated at the Census of the North-Western Provinces, taken on 1st January 1853, with the exception of the district of Sirsa,* for which the earliest reliable figures are obtained from a settlement Census taken village by village between 1852 and 1862.† The next Census was taken on the 10th of January 1868, and embraced the whole British territory of the Punjab as it then stood, but did not extend to the dominions of the Native States. This was succeeded by a more elaborate and careful enumeration on the 17th February 1881, which embraced the whole population of the old Province. The Census of 26th February 1891 related, with some insignificant variations, to the same area as that of 1881; but the Census of 1st March 1901 was extended to the Kurram Valley and the Shiranni country, territories on the North-West Frontier containing a population of 66,628 souls, and to the cantonments of the Malákand, Dir, Swát and Chitrál. The Census of 10th March 1911 embraced the whole Province as then constituted inclusive of the Native States. The Censuses of 1881, 1891, 1901 and 1911 were conducted on substantially the same principles. The three first enumerations were, it will be observed, separated, roughly speaking, from one another by identical intervals of a little more than 13 years, and are followed by

Successive enumerations.

* Now partly in Hissar and partly in Ferozepore.

† A rough enumeration had previously been made in 1849.

the three recent Censuses at intervals of 10 years. In the following paragraphs the figures of the Census of 1911 are always referred to, save when the contrary is expressed, and the returns of previous enumerations, where referred to, are the figures adjusted to represent the province as it was in March 1911.

Increase and decrease of population.

554. The population in British territory alone and in the Province as a whole, including the Native States, at each Census since 1881 is shown below :—

		Increase per cent. since last Census.	Actual population.
British Territory	1881	...	17,274,597
	1891	+10·0	19,009,368
	1901	+6·9	20,330,337
	1911	−1·7	19,974,956
Total Province, including Native States ...	1881	...	21,136,280
	1891	+10·1	23,272,648
	1901	+6·4	24,754,735
	1911	−2·3	24,187,750

Whereas the population in the British districts has fallen 1·7 per cent. since 1901, the fall in the Native States, where the population is generally far less stable, has been 4·8 per cent. The decrease in the provincial figure is confined entirely to females who have lost 404,766, or 4·2 per cent., while males have increased by 49,385 or ·45 per cent. Roughly speaking, the western and north-east Himalayan tracts have gained in population, while the north, central and southern areas have lost. The largest decreases have been in Ludhiána, Ambála, Amritsar, Rohtak, Gurgaon and Jullundur and in the Kalsia, Nábha, Kapúrthala, Patiála and Pataudi States. In so far as these decreases are not due to migration to the canal colonies, they are solely due to the ravages of plague and malaria. Plague, by being particularly fatal to women of child-bearing age, has had a powerful effect in retarding the recuperative power of the population ; for, though a fever epidemic results at once in a low birth rate, the normal is quickly regained as soon as the epidemic has disappeared. The Multán division, however, has suffered less severely as a whole from disease than the rest of the province. Only two or three districts of the west are affected by the migration to the colonies, but the increases in Lyallpur, Shahpur and Jhang are quite abnormal. The increases in Multán, Miánwáli, Montgomery, Muzaffargarh and Dera Gházi Khan, which are entirely due to favourable agricultural conditions and the general development of resources, are a measure of the enormous loss suffered by the Province as a whole during the last decade. The figures for the Census "natural divisions" are as follows :— Indo-Gangetic Plain West 11,027,490, decrease 9 per cent. ; Himalayan 1,724,480, increase 2 per cent. ; Sub-Himalayan 5,805,081, decrease 6 per cent.; and North-West Dry Area 5,630,699, increase 18 per cent.*

* Except for the combination of the Himalayan and Salt Range tracts, these natural divisions roughly correspond to those described in paragraph 35.

The Census divisions are as follows :—

I.—Indo-Gangetic Plain West—

1. Hissar.
2. Loháru State.
3. Rohtak.
4. Dujána State.
5. Gurgaon.
6. Pataudi State.
7. Delhi.
8. Karnál.
9. Jullundur.
10. Kapúrthala State.
11. Ludhiána.
12. Máler Kotla State.
13. Ferozepore.
14. Faridkot State.
15. Patiála State.
16. Jínd State.
17. Nábha State.
18. Lahore.
19. Amritsar.
20. Gujránwála.

II.—Himalayan—

21. Náhan State.
22. Simla.
23. Simla Hill States.
24. Kángra.
25. Mandi State.
26. Suket State.
27. Chamba State.

III.—Sub-Himalayan—

28. Ambála.
29. Kalsia State.
30. Hoshiárpur.
31. Gurdáspur.
32. Siálkot.
33. Gujrát.
34. Jhelum.
35. Ráwalpindi.
36. Attock.

IV.—North-West Dry Area.

37. Montgomery.
38. Shahpur.
39. Miánwáli.
40. Lyallpur.
41. Jhang.
42. Multán.
43. Baháwalpur State.
44. Muzaffargarh.
45. Dera Gházi Khan.

555. Of the total population of the Punjab, 89·4 per cent. is rural and 10·6 per cent. urban, the rural population being largest in the hills and in the western districts. The grouping is in the following proportions :— Distribution over towns and villages.

Size of villages or towns.	Percentage of the population.		Size of villages or towns.	Percentage of the population.	
	1901.	1911.		1901.	1911.
Under 500	25·4	25·9	10,000—20,000 ...	2·2	2·0
500—1,000	24·0	25·6	20,000—50,000 ...	1·5	1·5
1,000—2,000	22·9	22·7	50,000—100,000 ...	1·8	1·9
2,000—5,000	15·3	14·1	Over 100,000 ...	2·3	2·5
5,000—10,000	4·5	3·8			

The cities of more than 100,000 souls are—Delhi (232,837), Lahore (228,687), and Amritsar (152,756) ; and the towns of more than 50,000 souls

are—Ráwalpindi (86,483), Multán (99,243), Ambála (80,131), Jullundur (69,318), Siálkot (64,869), and Ferozepore (50,836). Patiála, previously included in this class, has now a population of 46,974 only. These figures include the cantonment populations.

Towns.

556. A "town" was defined to include any municipality, civil lines or cantonments and any place with a population of not less than 5,000 souls which has urban characteristics. The definition has been substantially the same since 1881, but "notified areas" were not treated as municipalities, and the stricter classfication has resulted in a decrease in the number of Census towns from 228 in 1901 to 174 in 1911, which figure moreover includes 12 places not treated as towns in 1901. The average population per town is about 14,800 souls. Between 1881 and 1891 the town population increased 7·4 per cent., and between 1891 and 1901, 4·7 per cent. Between 1901 and 1911 it has fallen 1·5 per cent. The figures are for the towns common to each pair of censuses. There is, it will be seen, no tendency for the general population to crowd into the towns. Of the three Punjab cities (towns with population of over 100,000) Delhi has increased 11½ per cent. in the decade, and Lahore 12·7 per cent., but Amritsar, owing to plague and malaria, has declined by 6 per cent.

Villages.

557. The "Census" village is identical with the Revenue estate in British districts, and a similar arrangement has been adopted in the Native States, but in the hills and parts of the western districts, for reasons which appear in section 4, this village is a purely artificial unit. The total number of villages is 44,400, some increase being due to the formation of new villages and the reduction of certain "towns" to village status. The average population per village is 487, and the incidence is generally about 50 per acre.

Distribution over area.

558. The number of souls per square mile is 177 against 185 in 1901, varying in British territory from 560 in Jullundur to 63 in Miánwáli and in the States from 426 in Kapúrthala and Máler Kotla to 42 in Chamba. Generally speaking, the density increases from the ends to the centre of the Province, though Delhi is an exception. The most thinly populated portions of the Punjab lie on the west, south-west and north-east of the Province. The primary condition that determines the density of the population is the existence either of an ample rainfall or of facilities for irrigation. The intrinsic fertility of the soil is a secondary factor. Complete figures for cultivation are available only for the British districts, where it is found that the density on total area is 200 per square mile, on gross cultivated area 431, and on net cultivated area 499. The gross cultivated area includes the area double cropped. In the Himalayas, where the non-agricultural population is large, the density on the net cultivated area is as high as 965 per square mile, and it is lowest in the Western Plains, where it is 435 only. No district in the Province can now be regarded as congested. Migration to the colonies followed by the visitation of plague has greatly reduced the pressure of the population of the submontane districts, where it was at one time feared that population was rapidly over-running the increase in means of livelihood.

Distribution among houses.

559. A considerable change was introduced at this Census in the definition of a "house" with the object of bringing it more into accord with facts and of making it less artificial. The result was largely to multiply the number of houses, and proportionately to reduce the average number of persons per house. The total number of occupied houses was returned as 5,405,015, of which 4,454,236 were in British territory, giving 40 houses per square mile for the Province and 4·5 persons per house. The former proportion varies from 71 in the Sub-Himalayan tract to 17 in the Himalayas, but the latter is more or less uniform throughout the Province: and the definition adopted is probably justified by this result.

Distribution by religions.

560. The population of the Province consists of 8,773,621 Hindus, 2,883,729 Sikhs, 12,275,477 Muhammadans, 199,751 Christians, 46,775 Jains and 8,397 of other religions: the proportions *per mille* being 363 Hindus,

119 Sikhs, 508 Muhammadans, 8 Christians and 2 Jains. The Delhi division is preponderatingly Hindu with 682 *per mille*. but the north and west is Muhammadan with 866 *per mille* in the Ráwalpindi division and 779 in Multán. The Lahore division is fairly typical of the Province, with proportions of 243 Hindus *per mille*, 158 Sikhs, 574 Muhammadans and 25 Christians: but in the Jullundur division the position of the Hindus and Muhammadans is reversed. Although the Punjab is the Province of the Sikhs, it is not numerically speaking a Sikh Province. Even in the Jullundur division the proportion of Sikhs does not rise above 197 *per mille*, though in the Ludhiána district it is as much as 400, and in Patiála, where one-fifth of the whole reside, it is 377. Kángra returns the largest number, 725,156, and the largest proportion, 942, of Hindus. The most exclusively Muhammadan districts are Dera Gházi Khan, 884, and Miánwáli, 882 *per mille*. Christians are conspicuous only in the Lahore division, and in Siálkot the proportion of Christians is 50 *per mille*. Practically the whole of the Jains are located in the Delhi division where they are fairly evenly distributed over the districts and States of the plains. The Hindu sects separately tabulated at the recent Census numbered 38, but over 7 millions were returned under Sanatan Dharm and half a million under Lal Begi. Similarly, although five-sixths of the Sikhs were returned as belonging to *Kesdhari* (long-haired) sects as opposed to *Sejhdhari* (short-haired) ones, the great majority under the former are returned under unspecified sects and the latter are chiefly Nánakpanthis, followers of the first Guru. The Muhammadans are almost wholly Sunnis, 2 per cent. only being returned as Shias, principally in the Jhang, Mianwali, Muzaffargarh and Shahpur districts. Since the previous Census the Hindu population has declined 15 per cent., while the Sikhs have increased 37 per cent. These changes are to some extent due to more accurate enumeration, and the combined figures show a decrease of 7 per cent. as the effect of plague on these two religions. The small Jain community has also for the same reason decreased, but the Muhammadans with their large numbers in the west of the Province are practically stationary, the increase being under 1 per cent. Christians have increased by 200 per cent., due to an increase in the Native Christian community from 37,980 to 163,994.

Migration and birth-place.

561. Over 97 per cent. of the population of the Province were born within the Province; over 2 per cent. in other parts of India, and 54,267 all told outside India. Of the Punjab-born population, 94½ per cent. were at their homes at the Census, 4 per cent. in contiguous districts, and 1½ per cent. in more distant districts. The corresponding figures in 1901 were 97½, 2, and ½ per cent. The improved means of communication are responsible for freer intercourse between different parts of the Province. For various reasons the present figures probably represent the minimum rather than normal migration, but the Indian is demonstrably a home-loving individual. The bulk of the permanent migration has taken place from the congested districts to the canal colonies.

Extra-provincial migration in India.

562. Emigration to countries beyond India is dealt with in section 49. The total number of immigrants from other parts of India is 605,952, and of emigrants to other parts of India 504,161, the net result being a gain to the Province of 101,791 souls. In both cases the chief movement, between 60 and 70 per cent. of the whole, is between the Province and contiguous districts, and the figures are appreciably lower than at the previous Census, when they were 663,222 and 506,033, respectively. Casual immigration from Rájpútána was checked by the favourable agricultural conditions at home, and immigration from the North-West Frontier Province was in 1901 for special reasons abnormal. The reduction in the total population of the Punjab and prosperous times have no doubt contributed to reduce emigration from the Province. The excess of immigrants over emigrants is a usual and natural feature of the enumerations. The chief figures are Rájpútána + 248,152, — 89,637; the United Provinces + 219,913 — 1,22,289;

Kashmir + 72,369, — 59,707; North-West Frontier Province + 35,271, — 68,893; Bombay (Sind, &c.) + 10,583, — 55,444. The migration is largely due, especially in the case of the United Provinces, to the exchange of women in marriage. A custom exists among the Hindus of the south-east of taking wives from the east which causes some immigration of females from the United Provinces.

Intra-provincial migration.

563. The most notable feature of intra-provincial migration is the immigration to the canal colonies of the west which is separately noticed. In migration between adjoining districts the proportion of females preponderates generally: but as the source of immigration recedes, the proportion of males increases. The Hindu custom of marrying outside the exogamous group and outside the native village is responsible for the female migration between adjoining districts which is more a feature of the east of the Province than of the Muhammadan west where marriage with near relatives is encouraged rather than prohibited. Apart from these two causes migration is confined for the most part to temporary migration in search of pasture and employment.

Migration between districts and States.

564. As between British territory and Native States the balance of migration is now the reverse of that found in 1891 and 1901, in which latter year the districts gained some 40,000 souls. The present Census shows a gain of 26,000 to the States. Immigration from the States has decreased 5·3 per cent. and emigration from them 22 per cent. The general heavy mortality in the States has contributed to reduce their losses by emigration. The continuous emigration from Patiála has been stayed by the recent development of resources, and instead of losing 80,000 souls as in 1901 its figures for migration almost balance. The irrigation of the Bahawalpur desert has offered inducements to outsiders, and the State has gained some 24,000 souls.

Colony immigration.

565. Special tables have been drawn up to show as far as administrative units permit the immigration into the two great colonies of the west. The proportion of immigrants in the colony population depends mainly on the age of the settlements as the new generation is largely born in the new home.

In the Chenab Colony the population, which includes the non-colony population of the Jhang district, is 1,785,700 persons, of whom 34 per cent. are immigrants from outside. Siálkot has contributed 96,984, Amritsar 81,144, Jullundur 70,847, Montgomery 68,581, Gurdáspur 52,701 and Hoshiárpur 44,234. The immigration from the adjoining district of Montgomery is however of special character and to a large extent of temporary nature. Nearly a quarter of the immigrants are of the menial classes who have accompanied their masters to the colony. Few females come at first, but as the colonists settle down the proportion of female immigrants increases, and there are now 7 to every 10 males: the proportion of child immigrants decreases as a consequence.

The Jhelum Colony is a much smaller affair, and the total number of immigrants is 141,073 only, of whom Gujrát has contributed 30,049, Siálkot 29,257 and Jhang 20,912. The immigration from Jhang and to some extent that from Gujrát also is of the special character ascribed to Montgomery in the Chenab Colony. In this colony there are only 6 women to every 10 men among the immigrants.

The ages of the people.

566. The table in the margin shows the distribution of 10,000 of each sex in the Province. The age statistics of an Indian Census are peculiarly liable to error from mis-statements due to ignorance, to superstition or to vanity, and various devices of manipulation are employed to reduce the error. On the recorded figures, however, the mean age of the total population is 25·2 in the case of males and 24·7 in that of females. Males as a rule

Census.	Sex.	0—10.	10—20.	20—30.	30—40.	40—50.	50—60.	60 and over.
1901 ...	Male ...	2,600	2,144	1,631	1,370	998	651	606
1911 ...	„ ...	2,610	2,104	1,723	1,326	979	657	601
1901 ...	Female	2,715	1,930	1,726	1,402	1,010	621	596
1911 ...	„ ...	2,861	1,846	1,773	1,342	998	611	560

appear to be longer lived than females, but the proportion of female children to the total female population is at present abnormally large. By religions the mean age is highest among the Sikhs, followed by the Hindus. It is low among the Muhammadans and lowest among Christians. The mean age of females among the Sikhs is as high as that of males, but the proportion of female births is unusually low. Among Muhammadans and Christians the proportion of children is high, and among the Christians there are few aged persons. The immunity of the Province from fever in 1909 and 1910 in accelerating the birth-rate has assisted to swell the proportion of the numbers in the earliest of the periods given in the statement, but the effects of plague are very apparent in the other periods; the increase in the age periods 20—30 being due to the comparative immunity of children and especially male children who have recently grown up into this class. This increase is important in its bearing on the recuperative power of the present population.

The civil condition of the people.

567. The figures in the margin give the distribution in the Punjab population of 1,000 persons of each sex, and show that, as in previous Censuses, many males remain unmarried, while the proportion of unmarried females is small. Among females indeed marriage is universal, and out of 10,000 of the total female population 19 only were unmarried at the age of forty or over. Among males the number is 164, the higher number being due partly to the shortage of females and also to admissions into celibate orders. The figures show in a marked degree the effect of plague in attacking the middle-aged rather than persons at the extremes of life. The age of marriage is as a rule lower in the east than in the west of the Punjab, but the custom varies in the same locality and in the same religious community, being mainly dependent on social considerations. Child marriage is, however, essentially a Hindu practice. The returns show that per thousand girls between the ages of 10—15 among Hindus 392 were married and 10 widowed, among Sikhs 289, among Muhammadans 216, and among Christians 156. For the age periods 5—10 and under 5 the figures are Hindus 68 and 2, Sikhs 31 and 0, Muhammadan 28 and 1, and Christians 15 and 1.

Civil condition.	Males.	Females.
Single	528	377
Married	388	480
Widowed	84	143
All conditions	1,000	1,000

Polyandry.

568. Polyandry is confined to the Upper Himalayas, *e.g.*, Spiti, Lahul, Saraj (Kulu) and the upper parts of Bashahr and Náhan. In the Rainka, Pawta and Náhan tracts of the latter for example there are 32,288 married men and only 25,082 married women, and in the Rampur, Chini and Delath tracts of Bashahr there are 12,646 and 11,295, respectively.

Polygamy.

569. There are 101 wives to every 100 husbands, and the number of polygamous marriages is obviously rare. Polygamy is indeed mainly confined to the Muhammadans, among whom there are 101·6 wives to every 100 husbands. Among Hindus it is unusual to marry a second wife during the lifetime of the first unless she fails to bear a son, suffers from some infirmity or is unfaithful. Ordinarily a Muhammadan too has only one wife. But, except in the educated classes, if means permit, a Muhammadan will go to the full limit of four.

The proportions of the sexes.

570. There are, in the Punjab, 816 females to 1,000 males, as against 854 in 1901 and 851 in 1891 and 845 in 1881. The previous improvement in the ratio of females which was attributed to improved conditions, moral and material, rather than to improved enumeration, has been thoroughly wiped out by the disastrous mortality from plague among women, although the proportion of female to male births rose to 909 *per mille* compared with 906 in the preceding decade. The figures are to some extent affected by migration, and as males emigrate to countries beyond India in some numbers, while females

do not, the real ratio is probably a little lower than the one given above. The unreliability of age statistics renders any conclusions as to the proportion of females at the various age periods unsatisfactory, but the statistics show that the proportion of females is highest between the ages of 1 and 2 as female infants stand the period of teething better, but the practice of ceasing to nurse the infant girl at an earlier age than the infant boy among other forms of neglect then tells on the female children.

Proportion of sex by religion.

571. The proportion of females to every 1,000 males varies very widely in the different religions; among the Jains it is 850, Hindus 820, Sikhs 746, Muhammadans 833, and Christians 707. Among the Jains the abhorrence of destroying life naturally prevents the neglect of female infants and the prevalence of asceticism among widows apparently tends to longevity. The immigrant Christian population is largely composed of unmarried males. As in the two previous enumerations the Sikhs have a remarkably low proportion of females, and especially so in the early years of life. Owing, however, to the complicated mutual relationship of Hindus and Sikhs and to the return as Sikhs at the present Census of a large number of persons formerly returned as Hindus, it is unsafe to deduce conclusions from the separate sex statistics of the two religions. Similar causes probably affect both communities. The tendency to return Sikh females as Hindus and the conversion of Hindu males to Sikhism among other causes may affect the figures, but the fact remains that low ratios of females of all ages are typical of the Jats of the Central Punjab, among whom Sikhism is the dominent religion. As affecting both religions alike the factor which probably is most operative is the persistent desire for the continuance of the male line of descent. In the Himalayan tract, however, which is mainly Hindu, the proportion of females is high, though even there the females do not exceed the males. The proportion of females among Muhammadans, though low, is higher than that among Hindus. It may be that they do not neglect their female children so much and possibly the female death-rate is kept down by the out-door life which Muhammadan females are compelled to live among this predominantly agricultural community. It is remarkable, however, that the proportion of female births is lower among Muhammadans, being 907 to every 1,000 male births as against 913 among Hindus.

Proportion of sexes by caste.

572. All castes almost without exception have fewer females than males. A tendency for the deficiency of females to be more marked in the higher castes is to some extent obliterated by the fact that a man may in many cases marry a girl of lower caste, while the converse rarely occurs. Where this practice is not followed the proportion of females naturally falls, and among the Hindu Rajputs is as low as 756; whereas among Muhammadan Rajputs, Sayads and Kureshis it is 841, 875 and 896, respectively. The paucity of females is common to all Hindu and Sikh tribes, with the exception of the hill tribes—Kanets 949, Dagis (Kolis) 939 and Ghiraths 916. The low proportion of women among Hindu and Sikh Jats is proverbial. It is 774 among Hindus and 702 among Sikhs as compared with 807 among Muhammadans, and is solely attributable to the neglect of female infant life. In after-life the disparity as between Hindus and Sikhs is to some extent levelled by the admission into Sikh families of Hindu women on marriage.

Distribution by occupations.

573. The distribution of the population according to the four main classes of occupation recognized by the Census is given in the margin. The new classified scheme adopted at the recent Census is exhaustive and divides the occupations into 4 classes, 12 sub-classes, 55 orders and 169 groups. In the first class 58 per cent. of the total population depends on agriculture and an additional 2 per cent. on pasture as a means of livelihood. A further 1 per cent., principally otherwise engaged, is also returned as parti-

Occupation.	Numbers.	Percentage.
I.—Production of raw materials.	14,538,276	60
II.—Preparation and supply of material substances.	7,199,969	30
III.—Public administration and liberal arts.	1,078,163	4
IV.—Miscellaneous ...	1,371,342	6

ally agriculturist. In the second class industry accounts for 20 per cent., transport for 3 per cent., and trade for 7 per cent. In the third class public force and public administration support 2 per cent. and the professions a further 1 per cent. Under miscellaneous are included domestic servants 2 per cent., general labourers unspecified 1 per cent., and the unproductive class of prisoners, lunatics, beggars, vagrants and the like amounting to 3 per cent. of the whole population.

Industry.

574. The division of labour in the Province has not as yet proceeded very far and classification is difficult. The carpenter for example is often an ironsmith, the shop-keeper a money-lender, and the agriculturist a trader. Cotton still continues to furnish the most important industry of the Province. Some 883,000 souls depend on weaving and 90,000 on ginning and otherwise preparing the material. Neglecting the scavengers who form the next largest body of the artizan classes boot-making supports over 540,000 persons. The other industries which support large bodies of the population are detailed in the statement given in the margin. The vast majority of these people are dependent on the agricultural or cottage industries of the Province. Factories, though they number 443, employ no more than 49,324 persons all told, and it is unlikely that more than 150,000, inclusive of dependants, derive their means of livelihood from work in the factories.

Occupation.	Numbers.
Cotton ginning, spinning, weaving ...	972,899
Carpenters	380 649
Basket makers	104,100
Metal workers	240.096
Potters and brick-makers	349,284
Oil makers	120,650
Rice and flour grinders	113,318
Tailors, embroiderers	151,966
Boot-makers	540,490
Washermen and dyers	177,671
Barbers	271,061
Masons and bricklayers	164.031
Goldsmiths and jewellers	190 892
Scavengers	591,270
Total detailed ...	4,363,377
Total Industry ...	4,915,297

Professions.

575. The professions provide a livelihood for 602,576 persons. More than half of these are enumerated under religion 342,553. Medicine accounts for 49,496, instruction 40,131, and law, including clerks and petition-writers, a meagre 23,046. Of 147,350 persons whose livelihood depends on letters and arts and sciences 128,071 are music players, singers and actors or their dependants.

Literacy.

576. Literacy is now defined as ability to read and write a letter, and by that standard 37 *per mille* of the total population are returned as literate: the proportion among males is 63 and among females 6. The figures are in some measure affected by the high proportion of children among the present population. Eight *per mille* of the males are literate in English or six *per mille*, if Europeans and allied races are excluded. Exclusive of the latter class, only 3,100 females are literate in English and they are almost exclusively either Hindus or Native Christians. The figures for literacy by religions is given in the margin. The backwardness of the Muhammadan population is strongly marked and is of course to a large extent due to the large proportion of persons of this religion who belong to the poorer or more particularly rural classes. The comparatively high proportion of literate Sikh women is a tribute to the efforts of individual workers as for example at Ferozepore. The literacy among Native Christians reflects the importance attached by Christians to the education of women. The vernaculars used by literates are—Urdu 47 per cent., Hindi 17 per cent., and Punjabi 36 per cent. The literate Hindus are returned as using each of these vernaculars in fairly equal proportions. Sikhs employ Punjabi mainly and Urdu in very minor degree, while Muhammadans employ Urdu almost exclusively.

Religion.	Per mille.	
	Males.	Females.
Hindu ...	95	7
Sikh ...	94	11
Muhammadan ...	27	2
Native Christian ...	44	35

Infirmities.

577. The figures in the margin show the numbers in each 10,000 of the population suffering from each of the infirmities recorded at the last two Censuses. The improvement since 1881 is very marked, only 37 persons in 10,000 being now returned as afflicted as against 72 in that year. The improvement is marked in each infirmity. Since 1901 the number of deaf-mutes has increased, but insanity is often confused with deaf-mutism by the enumerating agency, and the latter infirmity showed a considerable decrease at the last Census. The decline in the number of insane allays any suspicions aroused by the increase in the number of inmates in the Lunatic Asylum.

Infirmities.	Number suffering per 10,000.	
	1901.	1911.
Total afflicted	43·5	37·4
Total infirmities	43·9	37·7
Insane	3·5	2·6
Deaf-mutes	8·0	8·4
Blind	30·5	25·5
Lepers	1·9	1·2

Summer Census of Hill Stations.

Measures.

578. A special Census of the summer populations of Simla, Murree and Dalhousie was taken after dark on the 30th June 1911, advantage being taken for the purpose of the staff and arrangements of the general Census carried out earlier in the year.

Simla.

579. In Simla similar enumerations had taken place in 1869, 1878, 1889, 1898, 1904 and 1907, but only the last three could safely be accepted for purposes of comparison. The Census was taken in these cases, as in the present, at a time when the summer population is normal. The present enumeration gives a total normal summer population of 37,895 against the 19,405 recorded at the general Census of the preceding March. The difference between these figures 18,490 represents the summer exodus to Simla. The station appears to have grown steadily in population from 1869 to 1904, the opening of the Simla-Kálka Railway in 1903 assisting appreciably. Since then the development has been slower, the rate of growth being ·14 per cent. per annum.

The population is composed of 3,961 Europeans and allied races, 984 Anglo-Indians, 32,686 Indians and 264 Asiatics. Males number 28,459 and females 9,436. In other words, there are only 33 females to every 100 males. By nationalities the proportions, however, are Europeans 98, Anglo-Indians 109, Indians 27 and Asiatics 26. Thirty per cent. of the population were under 20 years of age. The figures by religions are fairly uniform, the only considerable variation being among the Sikhs, among whom many young boys work as carpenters. Twelve per cent. were under 10 : the proportion among Christians being as high as 20 per cent. Thirty-one per cent. were literate, including 19 per cent. literate in English. Among Europeans and Anglo-Indians practically only children were illiterate, but among the Indian population only 23 per cent. could read and write a letter. About two-thirds of the population or 24,964 persons were "actual workers." Of this number about 25 per cent. are in Government service, the number of officers being 308. The balance of the workers are accounted for under trade 7 per cent., transport (coolies chiefly) 12 per cent., domestic service 23 per cent., independent means 2 per cent., and other occupations 30 per cent.

The total number of occupied houses is returned at 7,442. Owing to the adoption of a new definition, under which every building occupied exclusively by one or more families was treated as a separate house, comparison in the Indian quarters with previous returns is impossible. The figures show that on the average each house so defined contains five occupants.

Murree.

580. No such enumeration had previously been carried out in Murree. The population was found to be 16,934 as against the 1,705 recorded

in March. The summer increase of 15,229 is largely due to the presence of British troops in Kuldana, Topa and Ghariál which were included in the Census. Europeans number 5,027, Anglo-Indians 158, Indians 11,726 and Asiatics 23. Males number 12,999 and females 3,935 or 30 females to 100 males. Twenty-eight per cent. of the total population was under 20; among Christians as much as 16 per cent. being under 10. Again 37 per cent. were literate, only 15 per cent. of the Indian population being so far literate as to be able to read and write a letter. As many as 11,642 persons or 68 per cent. (chiefly males) come under the Census qualification of actual workers; distributed among—Government service 38 per cent., trade 7 per cent., transport 5 per cent., domestic service 27 per cent. and other occupations 23 per cent. Occupied houses defined as explained above number 3,168, the average per house being five.

581. The Census included the whole municipal area, and the cantonments of Balun, Tikka, Mankot and Banikhet. A previous Census had taken place in 1898, but extended to the municipal area only. The total population enumerated was 7,592 only, showing a summer increase of 6,010 over the 1,582 enumerated at the general Census. In 1898 the population of the municipality was 3,310 as against 3,949 now,—an increase, for what it is worth, of 639 in 14 years. Europeans number 2,256, Anglo-Indians 25, Indians 5,281 and Asiatics 30. Males are 5,826 and females 1,766 or 30 females to 100 males. Twenty-five per cent. of the population is under 20 and 16 per cent. among Christians under 10. Thirty-eight per cent. are literate, only 17 per cent. of the Indians, however, being able to read and write a letter. The number of actual workers, 5,540, is 73 per cent.; distributed among—Government servants 37 per cent., trade 4 per cent., transport 4 per cent., domestic service 22 per cent. and other occupations 32 per cent. Occupied houses numbered 1,562 and the number of persons per house was, as in the other hill stations, five. **Dalhousie.**

48.—Births and Deaths.

582. It has to be noted that it is the practice to calculate the ratios of births and deaths on the population recorded at the previous Census, and that, therefore, the ratios of the year 1911 are referred to different figures for population from those adopted in previous years. The matter is of importance, as the difference is large in the case of many districts. **Explanation.**

As a matter of fact, the actual population by the Census of 1911 exceeded by 180,412, that estimated from the birth and death returns of the previous decade. The difference is about ·9 per cent. At the Census of 1901 the excess was 22,399 only. These results testify to the efficiency of the registration agencies. Much greater differences of course exist between the estimated and actual population of many districts, but these are largely to be accounted for by migration in connection with the canal colonies.

583. The total number of births in 1911 amounted to 865,775, at a rate of 43·9 *per mille*. Male births exceeded female births by 38,779, an excess of 1·9 per cent. Fever, more than any other cause, reduces the birth-rate and, since the low birth rate of 1909, consequent on the fever epidemic of 1908, the birth-rate has been steadily increasing: the years 1910 and 1911 having been remarkably free from fever. With the exception of Simla, Hoshiárpur, Gurdáspur and Siálkot all districts show an increase in birth-rate compared with their quinquennial average. In the 40 towns of the Province with a population of 10,000 and upwards the birth rate was 42 *per mille*, the figures for the four largest towns being Multán 45, Amritsar 43, Delhi 38 and Lahore 36. **Births.**

584. The total number of deaths was 671,919, at a rate of 34·05 *per mille*. Even in a year of freedom from malaria a little less than half of the deaths are ascribed to "fevers." Roughly a quarter were due to plague and about one-fifth to "all other causes." Plague, however, was the determining factor of a high or low death-rate in each district. The death-rate in the towns was 39·74 *per mille*. Delhi showing 59·58, Amritsar 38·18, Multán 32·55 and Lahore 29·86, The high rate in Delhi is probably due to plague. **Deaths.**

Excess of births over deaths.

585. For the Province as a whole the number of births exceeded the number of deaths by 193,856 or practically 1 per cent. The excess was shared by all districts except Gurgaon, Delhi, Ambála and Hoshiárpur, which suffered considerably from plague, and Simla, the conditions of which are special. The greatest excess was observed in Lyallpur as usual and in Jhang, districts to which the recent extensions of canal irrigation has attracted a young healthy population.

Mortality.

586. A feature of the year 1911 is that October, usually the most unhealthy month, owing to the freedom of the Province from malaria, showed the lowest monthly death-rate. This unhappy distinction is accorded this year to the month of May closely followed by April, in both of which months plague was rampant. As usual, the mortality among infants under one year was the highest of the age mortalities, though, for what the figures are worth, it may be recorded that for males the rate has been reduced from 270 *per mille* in 1901 to 206·86 now and for females from 279 to 196. It may be noted that the female infant mortality is now less than that of males. The death-rate among Hindus was 36·84 *per mille* and among Muhammadans 31·91.

Cholera.

587. The mortality from cholera except in Siálkot was unimportant. The outbreak in this district was due to infection disseminated from the Gulu Shah cattle fair. Steps are being taken to improve the sanitary condition of the shrine, at which the fair takes place, and its surroundings.

Small-pox.

588. The mortality from small-pox, though larger than in the previous year, calls for no comment, except that the epidemic in Lahore caused a good deal of alarm locally and led the people to resort more freely to vaccination.

Plague.

589. The annual epidemic of plague was considerably more severe than in 1910, and 175,668 deaths are reported to have occurred in the British districts. The districts that were most severely stricken were Siálkot, 16,967 deaths, Amritsar, 15,958, Gurgaon, 15,611, Hoshiárpur, 14,784, and Gurdáspur, 14,572; the severe infection of Hoshiárpur, which has suffered for fourteen years, shows that there is at present no sign of the natural disappearance of the disease. Delhi city suffered a moderately severe outbreak in the spring, and Rawalpindi city became infected in April and suffered up to the end of the year; cities, however, as a rule, continue to show a less severe plague incidence than villages. The chief mortality occurred in April, May and June, due, it is believed, to the heavy general rain about the middle of March and consequent great increase in flea prevalence. In addition the appearance of a temperature of 85° Fahr., which coincides with the end of the active plague season, was greatly deferred. During the hot weather plague practically died out, but in the autumn a recrudescence occurred in 39 villages, where no evidence of importation could be elicited.

Malaria.

590. Fevers accounted for 302,417 deaths at a rate of 15·33 *per mille*, the lowest recorded since 1877. Following on a year itself comparatively free from malaria, the reduction of 40,000 in the mortality is striking. Under the head of "fevers" are classed many forms of sickness other than malaria, but it is probable that this reduction was obtained wholly under this special disease.

Other causes.

591. Dysentery and diarrhœa occasioned 11,713 deaths and diseases of the respiratory organs 45,294. To injuries 6,762 deaths are ascribed and 124,104 to "all other causes." These figures do not present any special features.

49.—Emigration and Immigration.

Indentured emigration.

592. Figures for indentured emigration carried on under the Indian Emigration Act (XVII of 1908) are published annually by the Government of India. The number of Punjabi emigrants is quite insignificant. In 1910-11, 149 left Calcutta, 108 Bombay and 75 Karáchi. In the last two cases the destination is the Persian Gulf ports. From Calcutta it is believed the emigrants proceed chiefly to British Guiana, Natal, Fiji and Trinidad.

The Inland Emigration Act of 1882 is not in force in this Province.

Other emigration.

593. Complete figures for emigration not controlled by the State are not available, though some statistics were collected at the recent Census. Figures for European countries, South Africa and Australia in particular have not been

obtained. In the countries for which figures have been received 4,542 Punjabis were enumerated, of whom 1,197 were in Hong Kong, 983 in Ceylon, 985 in the Straits Settlements, and 809 in Fiji. The total Punjabi emigration is of course very imperfectly represented by these results. Punjabis serving in the Army outside India on May 1st, 1911, numbered 2,218.

Immigration.

594. The number of immigrants from countries beyond India is 54,267, of whom 29,865 came from other Asiatic countries, almost entirely from Afghanistan, 23,906 from Europe, 122 from Africa, 267 from America and 107 from Australia. The immigrants from Afghanistan are composed of Pathans serving in the Army, Pawindahs working as labourers or petty traders, and Afghan refugees and their servants. Out of 23,311 immigrants from the United Kingdom, 18,596 confessed to hailing from England and Wales, 2,915 from Ireland, and only 1,719 from Scotland.

50.—Medical Relief.

Dispensaries.

Number of hospitals.

595. The number of dispensaries open at the end of the year 1911 amounted to 465, of which one was classed as State public, 266 as Local Fund and 35 as private-aided institutions. These three classes account for 302 of the total number. In addition there were 72 canal, 31 police, 45 railway and 3 "other" State institutions and 12 private non-aided hospitals. The Local Fund dispensaries were increased by three during the year, but two private institutions were closed. The figures given in the following 5 paragraphs relate to dispensaries of the first three classes above enumerated, 25 of which are for the treatment of female patients only.

Patients.

596. The total number of patients treated amounted to 4,097,749; some 200,000 less than in the previous year, the freedom of the Province from malaria having reduced the malaria patients by that amount. In-patients were only slightly less than in 1910 and amounted to 74,884, an encouraging feature being the increase in the number of female patients. Accommodation is, with a few notable exceptions, generally sufficient, and attention is being paid to the necessity of providing for the separate treatment of women in the few dispensaries where there is at present no such provision. The effect of the healthiness of the year is apparent in the figures for out-patients, which fell to 4,022,865. It is suggested that the increase in the number of private practitioners in the larger towns also contributes to the decrease in the out-patient department. With the exception of the decline of malaria the incidence of disease was much the same as usual.

Surgery.

597. The total number of surgical operations was 233,637, of which 25,817 were "selected," being an increase on the previous year's figures of 13,543 and 1,039, respectively. The death-rate was 18 only.

The selected operations include 11,564 for the extraction of the lens. Of the 10,005 persons who were operated on, 9,252 gained good vision, giving a percentage of 92·47. Amputations accounted for 576, with 27 deaths; stone in the bladder for 2,015, with 72 deaths; hernia for 262, with 14 deaths; abscess of the liver for 110, with 16 deaths; abdominal sections for 67, with 11 deaths; ovariotomies for 50, with 9 deaths; and Cæsarean sections for 32, with 18 deaths.

The noteworthy record is reported that Lala Mathra Das, Sub-Assistant Surgeon, at Moga, in Ferozepore district, performed no less than 2,873 selected operations, including 2,534 for cataract.

Finance.

598. The total expenditure of the year amounted to Rs. 11,79,186, half of which was spent on salaries and approximately Rs. 1½ lakhs on buildings or repairs. This was met by district boards (34 per cent.) and municipalities (36 per cent.), Government, chiefly in Lahore and Simla and on grants-in-aid (12 per cent.), subscriptions (12 per cent.) and miscellaneous sources (6 per cent.). The subscriptions, however, were mostly received from abroad for Mission institutions for females.

Abuse of dispensaries.

599. The tendency for those who can afford to pay for medical attendance to seek free medical relief at institutions maintained for the poor and needy, is one that it is desirable to check; and in some cases fees are charged to well-to-do patients in dispensaries. It is possible that those who can afford

to do so prefer to pay fees to a private medical practitioner rather than to the dispensary. If this is actually the case, the tendency can be regarded with satisfaction, as there is plenty of field for the activities both of public and private medical practitioners.

Mayo Hospital.

600. The foundation stone of the Mayo Hospital extension, which forms part of the Punjab King Edward Memorial, was laid by His Honour Sir Louis Dane, G.C.I.E., on the 21st December 1911, and it is expected that the work will be completed before the end of the year 1913.

Special dispensaries.

601. The total number of in-door patients treated in the 151 special dispensaries was 5,716. The majority were accommodated in the police hospitals, the canal dispensaries rarely having in-patient accommodation. Out-patients numbered 426,110, mainly in canal and railway hospitals. The total number of patients was 431,826, or 21,198 less than in the previous year. The Irrigation Department is being consulted on the subject of opening canal dispensaries to the general public. It is obviously to the advantage of the people that the district boards should obtain for them facilities of treatment at conveniently situated canal dispensaries, while the additional practice thereby obtained must increase the experience and usefulness of the Sub-Assistant Surgeons in charge.

Unaided dispensaries.

602. At the 12 private non-aided dispensaries, which have submitted returns, 66,604 persons were treated and 2,681 operations were performed.

Pasteur Institute.

Progress.

603. The work of the Institute continues to increase, and the anti-rabic treatment is increasingly resorted to by the Indian population. During 1911 2,268 cases were treated with a total death-rate of 1·9 per cent., of which, however, only a percentage of 0·6 are accounted "failures," death having occurred later than 15 days after the end of the 18-day course. Owing to the location of the Institute, a larger number of patients treated come from the Punjab than from any other Province.

The Pasteur Institute is employed as the provincial laboratory of the Punjab, and as such reported on 669 specimens during 1911. The principal work performed was serum diagnosis for typhoid, Malta or paratyphoid fever; examination of tumours and examination of brain for Negri bodies.

Leper Asylums.

Lepers.

604. No information regarding leper asylums is given in this year's report. A new Asylum is being built at Subáthu (Simla Hills).

Lunatic Asylum.

General conditions.

605. The number of inmates steadily rises. In 1911 the total population was 841 and the average daily attendance 635. The increase is explained to be due not to any general increase of lunacy, but to the asylum and its benefits becoming more widely appreciated, and indeed the majority of the patients still come from the neighbouring districts of Lahore, Sialkot and Amritsar. Only one-fifth of the inmates are females, a reversal of the usual rule in Europe, due to the objection felt to placing female relatives in any institution. Again the number of criminal lunatics amounts to about one-fifth of the whole. The use of Indian hemp in one form or another was the chief cause of those cases which had a physical origin: and it is noted that the great majority of admissions is of persons between 20 and 40 years of age.

Improvements

606. The comforts and amenities of the institution are steadily improved as funds allow. In the new hospital, with accommodation for 186 patients, opened in 1909 it is now possible to segregate efficiently all patients suffering from infectious diseases and at the same time the previous overcrowding in the male asylum has disappeared. It is claimed that the lunatics are as comfortable as they can be made, and they are immeasurably better off than in their own homes, where the only idea of treatment is to bind the patient hand and foot and keep him a close prisoner liable to be bled at frequent intervals or branded with a hot iron on the vertex of the skull, when more noisy than usual. For such as can be employed suitable work is provided: chiefly blanket and cloth weaving, gardening, munj-matting making, grass-cutting and domestic services, nor are amusements forgotten.

607. The total cost of the asylum, including Rs. 16,248 for work done by the Public Works Department, was Rs. 1,26,495 : of which Rs. 7,747 were provided by paying patients, Rs. 6,600 by the asylum manufactories, and Rs. 893 from miscellaneous sources. The net cost, Rs. 1,11,254, was defrayed in the first instance by the State, but contributions were obtained from municipal and district boards on account of the cost of their patients. Cost.

MALARIA INVESTIGATION.

608. Increasing attention has been shown throughout India in late years to the prevention and treatment of malaria, and, as a result of the Imperial Malaria Conference of 1909, a special investigation has been instituted in the Punjab, which is the most malaria-stricken of the Provinces. Lieutenant-Colonel Adie, I.M.S., one of the Civil Surgeons of the Province, widely recognised as an authority on malaria, was entrusted with the investigation as Chief Malaria Medical Officer in 1910, and much information has been collected. The appointment, which was sanctioned for a period of two years, has recently been extended for a further similar period. As a branch of the work, an investigation was undertaken in the Lahore jails into the action of the various salts of quinine, and for this purpose Assistant Surgeon Harnam Singh was specially deputed to assist Lieutenant-Colonel Adie. A report on this investigation has been received. The Chief Malaria Medical Officer has not as yet made public the results of his main investigations. Malaria.

51.—Sanitation.

609. The income derived from the sale of street sweepings in 1911 amounted to Rs. 1,45,260, the largest sums being realised in Amritsar, Lahore, Siálkot, Delhi and Gujránwála. The sales are reported to be adversely affected by the use of patent brick-kilns burning coal. Several municipalities dispose of sewage to cultivators and obtain income from the price paid for sullage. The area under sewage irrigation amounted last year to 1,250 acres and the income realised to Rs. 19,987, an increase of 84 acres and Rs. 1,422, respectively, on the figures for the previous year. Amritsar, Lahore and Delhi make most use in this way of sewage, the amounts obtained amounting in the case of these municipalities to Rs. 6,862 in Amritsar, Rs. 4,942 in Lahore and Rs. 3,039 in Delhi. Municipalities.

Out of an aggregate income for the year 1911-12 of some Rs. 71,46,000, the municipalities spent some Rs. 27,85,000 on objects included in the term sanitation, *viz.*, on conservancy Rs. 8,84,000, water-supply Rs. 8,40,000 (including Rs. 4,64,000 capital outlay), drainage Rs. 4,05,000 (including Rs. 3,08,000 capital outlay), and Rs. 6,56,108 on roads.

610. District boards expended Rs. 8,800 on sanitation, Rs. 13,323 on water-supply and Rs. 4,546 on drainage works. District boards.

611. During the year 4,811 wells were cleaned and 662 parapets constructed at a total cost of Rs. 30,080. In the direction of rural sanitation little else has as yet been effected. An attempt to introduce and maintain village sanitary note-books has met with little success. Rewards offered for village sanitation evoke no enthusiasm and can seldom be awarded, while the special rewards offered in the Chenab Colony have been obtained by all the villages which could be considered entitled to them and have now been withdrawn. Rural sanitation.

612. The extension of railway communications in the Province is leading to a large increase in the size and importance of fairs held at spots hitherto at a distance from the railway. This is particularly the case with the Nankana Sahib fair in Gujranwála and the Baba Farid fair in Montgomery. The importance from a sanitary point of view of these huge fairs is that they so often form a focus of an epidemic of cholera, as in the case of the Gulu Shah fair last year and of the Hardwár and the Katas fairs on more than one occasion. The sanitary supervision of these fairs engages a considerable amount of attention from the Sanitary Department, and the voluntary efforts of Rai Bahadur Dr. Thakur Das in Jhelum are specially brought to notice. Fairs.

613. The Sanitary Board met four times in 1911, but was unable to allot during the financial year 1910-11 as much as Rs. 1,11,526 out of the annual allotment of Rs. 1½ lakhs, owing to suitable schemes not being ready for consideration. Better results have been obtained in the financial year 1911-12, and practically the whole grant has been utilised. The only grant made in excess of Rs. 10,000 during 1911 was one of Rs. 16,914 to the Amritsar municipality for its sullage scheme. Sanitary Board.

Sanitary works.

614. Of the important works in progress during the year, the Amritsar sewage disposal scheme, the Gujrát intra-mural drainage works, the Pattoki (Lahore) drainage and water-works, and works of a similar nature at Jaranwála (Lyallpur) were actually or practically completed, and progress was made with filling up the depressions (*dhábs*) at Amritsar, with the Simla water-works extension and with the Delhi suburban drainage works and clearance of the river frontage (*bela*). Estimates for a water-borne sewage system for Lahore, for a water-supply for Siálkot and for an improved water-supply for Chorutta (Dera Gházi Khan) also were prepared and submitted.

Tube wells.

615. For the past four years experiments have been made under the orders of the Local Government for increasing the supply of water in wells by sinking tubes. These have been very successful. Where a sub-artesian spring exists a simple tube is most efficacious. In the more common case of percolation wells strainer tubes have been devised by Mr. Ashford of the Canal Workshops and Mr. Brownlees, Municipal Engineer, Amritsar, which yield a large and constant supply of absolutely pure water taken from a considerable depth below the surface. These discoveries go far to solve the problem of a good drinking supply for this Province.

Sanitation at Delhi.

616. The Sanitary Engineer was in immediate charge of the Delhi Durbar water supply works and other miscellaneous engineering works of similar nature at Delhi, for his successful execution of which Mr. Aikman was accorded the honour of a C. I. E.

52.—Vaccination

Work of staff.

617. The prevalence of small-pox in the towns of Delhi and Lahore and the districts of Jhelum, Delhi, Miánwáli and Ráwalpindi led to an increase during 1911-12 in the number of persons vaccinated and of operations performed, which amounted to 882,844 and 892,289, respectively. About one-fifth of the operations were re-vaccinations; and four-fifths primary vaccinations. The percentage of success achieved was 95·03 in the case of primary vaccinations and 71·85 in re-vaccinations. In explanation of a decline in the percentage of success, it is stated that certain difficulties, which are receiving attention, have been recently experienced in the preparation of lymph at the vaccine institute.

The experiment of house-to-house vaccination has been discontinued generally, owing to its unpopularity and costliness. It will be continued only in places where there is a distinct demand for it and where either it can be carried out without any increase of cost or the local authority is prepared to meet the extra cost.

Cost of vaccination.

618. The total cost of the department, including the pay of the Deputy Sanitary Commissioner and Superintendent, Vaccine Institute, amounted to Rs. 1,24,320, contributed by the Provincial Government (Rs. 40,537), district boards (Rs. 64,494 , municipalities (Rs. 16,778), and cantonments (Rs. 2,516). Some additional expenditure was occasioned on increased establishment and under contingencies of the institute. The average cost of each successful operation was 2 annas 8 pies, the increase in the total number having led to a reduction. Rupees 12,986 were obtained by the sale of vaccine, and if this is taken into consideration, the average cost is 2 annas and 4 pies only.

Vaccination in towns.

619. In towns in which the Vaccination Act is in force the percentage of children under one year of age and available for operation who were successfully vaccinated was as high as 86, the corresponding figure for other towns being 64.

Vaccination in Native States.

620. Vaccination further increases in popularity in the Native States especially in Patiála and Bahawalpur.

Vaccine Institute.

621. A new institute is being built on the site of the old Thagi jail, at Lahore, in which it has been for some time located. The Institute is called upon to supply not only the Province and its Native States, but the North-West Frontier Province, Baluchistan, Kashmír and even Nepal and Afghanistan, as well as military medical officers both in and out of the Punjab. It is confidently expected that the new Institute will be able adequately to meet the increasing demand for lymph.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this Chapter will be found in the report and statistical tables noted below :—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education in the Punjab during the quinquennium ending 1911-12.

(2) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1912.

(3) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1911-12.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1911-12.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Part III, Educational.

53.—GENERAL SYSTEM OF PUBLIC INSTRUCTION.

HISTORICAL.

Establishment of the Education Department.

622. The Department of Public Instruction in the Punjab was instituted in January 1856, and the first Annual Report of the Director, the late Mr. W. Arnold, was submitted shortly after the outbreak of the Mutiny in the year following. Education, however, had occupied the attention of Government ever since the annexation, and at the time when the Department was organised there were 34 schools maintained from public funds, and 12 Mission schools, most of which were in receipt of grants-in-aid.

The Educational Department was administered at first by a Director, 2 Inspectors of Schools, 10 Deputy Inspectors, and 60 Sub-Deputy Inspectors. The schools directly supported by Government consisted of 24 District (Zillah) Schools, 100 Tahsil Schools, and 4 Normal Schools. A cess of 1 per cent. on the land revenue was devoted to the maintenance of a large number of village schools. In addition private schools were encouraged to conform to the standards of the department and submit to inspection by Government officers through the system of grants-in-aid. The Department so constituted cost about Rs. 3 lakhs per annum.

Existing Indigenous Education.

623. Mr. Arnold's first step was to ascertain what the people had been doing themselves in the way of education. The idea of education was not new in the Punjab. A school phraseology was supplied chiefly by the Muhammadans, who as educators were in possession of the field. Not only was the Koran taught in every mosque, but outside a great many mosques the standard Persian works were taught to all comers. These Persian Schools were the most genuine educational institutions in the country, and formed the foundation of the existing Government vernacular school system. The teachers were almost exclusively Muhammadans, but among the pupils the Hindus were more numerous than the Muhammadans. Schools in which only the Koran was read by rote, and those in which the children of shopkeepers were taught arithmetic and book-keeping, were left out of consideration as

educationally worthless, and little more account was made of purely Arabic and Sanskrit Schools, in which young men and boys were trained for religious functions. The statistics of Gurmukhi Schools, which were chiefly of a religious character, were too imperfect to be of much assistance. Real Hindi Schools were very rare, and most of those returned as Hindi Schools were chiefly of the class described above for the benefit of shopkeepers or Brahmans. The average income of the teachers was found hardly to exceed Rs. 2 a month in cash, but offerings in kind and fees for performing religious ceremonies formed a material addition to their means of subsistence.

The institution of a Government Department of Education did not directly interfere with these private, or, as they are technically described, indigenous schools, and up to 1885 they were left very much to themselves by the department, though of course they suffered in competition with the better equipped and more practically useful public schools.

Adoption of the Urdu language.

624. It was resolved from the first to make the Urdu language and the Persian alphabet the one language and the one alphabet in Government Schools, the Urdu language being chosen as more than any other dialect the common vernacular of the Province, and the Persian character, inasmuch as it was said to be used almost exclusively by the population of the western half of the Punjab, and in nearly two-thirds of the indigenous schools of the eastern districts. Besides which, the Urdu language written in the Persian character was used in the Courts, and was the most general medium of communication in the business transactions of all classes, except in matters pertaining to their particular trades and occupations. At the same time Hindi Schools were to be encouraged wherever the people desired them, in view of the danger of throwing education entirely into the hands of the Muhammadans.

Question of the application of the Educational Cess and of opening Female Schools.

625. It was a question whether the 1 per cent. cess should be spent in aiding existing village schools, or in maintaining schools entirely under the control of the Department, each of which might serve for a cluster of villages; but when it appeared that the people held the payment of the cess as an acquittance of all claims upon them for the education of their children, the latter system was chosen by preference. It was intended at first that the establishment of schools for girls should be deferred until the new Department was in working order; but much interest was excited by the accounts received from the United Provinces of the progress of female education, and in the first year several schools were opened in the Punjab, and were believed to be in a satisfactory condition, although the visits of European officers were not allowed.

Changes in 1860 in the system of administration.

626. Such was the origin of public instruction in the Punjab, and its subsequent history has followed the lines then traced out. In 1860, however, an important change was made in the system of administration. It had been a moot point whether the management of the Cess schools should rest with the Educational or District Officers, but during the first few years the practice of the United Provinces was followed, by which schools of all kinds were under the direct control of the Department. The practical severance of the District authorities from the work of education obviously entailed a serious loss of power, and so much dissatisfaction was caused that the Vernacular schools, which formed the great majority, were transferred to the charge of the Deputy Commissioners. At the same time the Native Deputy Inspectors were dismissed, or employed on reduced salaries as School Muharrirs, and an attempt was made to entrust the subordinate control and inspection of Vernacular schools to the Tahsildars. The necessity for professional superintendence, however, soon became apparent, and eventually each district was provided with a District Inspector or Chief School Muharrir who was subordinate to the Deputy Commissioner and whose business it was to visit and inspect every school in his charge once a quarter, to maintain discipline, to appoint, transfer, or promote teachers, and generally to be the Deputy Commissioner's principal executive agent in the management of the schools.

627. In 1862 an enthusiastic movement was initiated in favour of female education, and a grand Durbar was held at Lahore under the presidency of Sir Robert Montgomery, the Lieutenant-Governor, for the purpose of enlisting the co-operation of the Chiefs and other Native gentlemen of the Punjab. Under this impulse hundreds of schools were opened, and in 1866 the number amounted to about 1,000, with 20,000 scholars. But it was easier to create a nominal attendance than to obtain any substantial results, and before long, in consequence of necessary reforms, there was a very considerable reduction. There is no reason to doubt the wisdom of the change of system which led to diminished numbers; but it may be regretted that there was so little foundation for an enterprise which at one time seemed to promise well. Encouragement of female education.

628. In 1864 Government Colleges were established at Lahore and Delhi. At the latter place there had been one before the Mutiny, which had since then been in abeyance. In 1865 the Anjuman-i-Punjab was founded, and in connection with it a scheme was originated for establishing an Oriental University. The proposed institution has since developed into the Punjab University. Between 1868 and 1870 a change of considerable importance was made in the status of village school masters. In 1859 their pay had been fixed in grades of Rs. 5, Rs. 7 and Rs. 10 per mensem, and, although these grades had not been rigidly observed, they represented the average scale of pay up to 1868. It was now determined that no teacher, excepting assistants, should draw less than Rs. 10 per mensem, and, as the time was unfavourable to proposals for increased expenditure, the result was that some 300 schools were closed and 10,000 scholars struck off the rolls. Progress to 1871.

629. Educational effort was greatly benefited by the Punjab Local Rates Act of 1871, the general effect of which in the course of the next few years was to double the amount hitherto received from the Educational Cess, which now became merged in the District Fund, and thus to increase largely the means at the disposal of the new district committees for the education of the agricultural class. The transfer of the direct control of village schools to the district committees was adopted as a further measure of decentralization. Meanwhile, increased assignments were made by the municipalities, and in 1873-74 the numbers on the rolls of village schools exceeded by 20,000, the lowest figure reached in 1869-70 after the reduction described above. At the same time by raising the pay and position of teachers and of inspecting officers in the subordinate grades, a further step was made towards the improvement of the general efficiency of the schools. Effect of the Punjab Local Rates Act, 1871.

630. The Middle School Examination, to test the proficiency of the scholars midway between the Primary and Entrance Standards, had been instituted in 1869; and in 1872-73 the first examinations by the Upper and Lower Primary Standards were held by the Inspectors. The classification of schools according to stages of instruction was gradually introduced during the next few years; and in 1879-80 a revised set of statistical forms was adopted under the orders of the Government of India. Under the new classification, a school which had hitherto been called a High School, with its high, middle and primary departments, was now treated in the returns as three separate schools—a High School, a Middle School and a Primary School. Similarly a Middle School was returned as two schools; and in this way the number of schools was nominally raised by upwards of 100, an error which was corrected by the statistical forms subsequently adopted on the recommendations of a Sub-Committee of the Education Commission appointed for the purpose. In 1877 the Government College at Delhi was abolished, with a view to having a fully equipped College for the province at Lahore. In 1875 the Mayo School of Industrial Art was established at Lahore, and in 1881 the Central Training College for the supply of trained teachers for English Schools and for Secondary Schools. The disorganization of society by epidemic fever is of frequent occurrence in Northern India; and between 1877 and 1880 education was seriously checked by this cause, and also by an extraordinary demand for labour during the Afghan War. The numbers returned as under instruction were Progress subsequent to 1871.

further reduced by the omission of Jail Schools from the new statistical tables. The period was one of steady improvement in the internal organization of the schools and in the character of the instruction imparted; but there was not that extension of education among the people that might have been expected, notwithstanding a considerable increase in expenditure. It was left to the next decade to witness a marked expansion of educational effort in the Punjab, carried forward on improved lines, and attended with the best results.

Recommendations of the Education Commission.

631. The Education Commission of 1882 marked a new era in the history of education in India. The whole educational system then prevailing was carefully considered in all its bearings; detailed recommendations of a practical character were made under every head; and these recommendations have not only formed the basis of a new departure in matters of public instruction, but continue to supply lines for guidance in all parts of the educational movement. The chief recommendations concerned the recognition and encouragement of Indigenous Schools so far as these can be made to serve any purpose of secular education; the need of increased efforts in favour of the extension of Primary Education; the rendering of Secondary Education less stereotyped, as well as more practical, than it had hitherto been; the revision of the system of scholarships so as to make them open to all students without restriction; the raising, gradually and cautiously, of the tuition fees up to a certain point; some modification of the grant-in-aid rules; facilities for the transfer of Government institutions to local management; the moral training and physical development of the students; the encouragement of Female Education; an increased inspecting agency; and the holding of conferences for the discussion of questions affecting education. The recommendations were generally adopted in the Punjab, which resulted in an all but complete reorganization of the Educational Department and of the educational machinery of the province.

Chief measures adopted.

632. Rules were laid down for the award of grants to Indigenous Schools according to various simple standards; and all public officers were required to bring to notice any schools that appeared suitable for a grant, if desired by the managers. In 1886-87 an allotment of over Rs. one lakh from provincial revenues was provided for the extension and improvement of Primary Education; and a number of Zamindari Schools, intended to meet the special simple requirements of the agricultural class, were opened in nearly very district. In the same year all schools for general education, situated in municipalities, with the exception of the Model or Practising Schools attached to Training Institutions, were transferred to the management of Municipal Committees, and rules were laid down with the view of affording every encouragement to their conversion into Aided Schools, when adequate guarantees of efficiency and permanency were available. Rules were framed making the further extension of Secondary Education ordinarily dependent on contributions from private sources. To give greater variety to the studies in Secondary Schools, a Clerical and Commercial Course was adopted by the Punjab University as alternative with the ordinary Entrance Course, and leading to office and business occupations rather than to continued University studies, and also a Special Science Course, fitting either for further scientific study or for some technical line of life. The rules for scholarships were entirely re-cast in conformity with the principles laid down by the Education Commission, Open Scholarships being awarded on a system common to the whole province, and Close Scholarships on more restricted conditions, but the award being in each case according to merit, and on the results of public examinations. Provision was also made for the encouragement of higher education amongst certain backward classes by founding the Jubilee Scholarships for Muhammadans and Zamindari Scholarships for Hindu agriculturists. New rules for the levy of fees were introduced in 1886, aided institutions being required to fix their rates at not less than three-fourths of those laid down for Government and Board Schools. The grant-in-aid rules were entirely re-cast in 1886, embodying the system of payment by results. Special attention was given to the subject of moral instruction and school discipline, and measures were adopted, including special instructions to Inspectors and Teachers and the

introduction of inter-school rules and of Good Conduct Registers, to secure the end in view. Great improvements were made in the arrangements for physical training. Gymnastic apparatus has been supplied to all the larger schools ; gymnastic teachers have been attached to the Training Institutions, to other individual schools, and as itinerant instructors in districts; playgrounds have been provided ; tournaments have been organized; and courses of instruction in athletics and elementary drill have been laid down for the various classes of schools. In 1886 a fifth circle of inspection was organised ; additional Assistant Inspectors were appointed; considerable improvement was effected in the position and prospects of District Inspectors; and in these and other ways the efficiency of the inspecting staff was largely augmented. In 1889 an Inspectress of Schools was appointed, the grant-in-aid rules specially providing for the encouragement of Female Schools ; and the institution of scholarships for girls on passing the Lower Primary and Upper Primary Examinations exercised a marked influence on the attendance in the higher classes. Educational Conferences have been held frequently since 1886, at which all matters affecting educational work in the province have been discussed; and it would be difficult to over-estimate the benefit to practical education of these meetings, or their advantage in furthering the educational policy of the Government.

633. Besides the measures sketched in the last paragraph, considerable progress was made in other directions in the years following the Education Commission of 1882. Two new Normal Schools were opened providing one such institution for each inspectional circle, and the Model Schools attached to the training institutions were placed on an improved footing. Permanent employment in a Government or Board School was made conditional on the possession of a Teacher's Certificate, and the grant-in aid rules ensured the continued employment of none but certificated teachers in aided schools also. A beginning was made with the training of female teachers in the formation of normal classes in several girls' schools, and a certificate examination for female teachers was instituted. In 1886, in furtherance of the policy of local self-government all the district (Zillah) schools were transferred to the management of municipal committees as already noted, but this devolution of control was not so successful as was anticipated, and control was resumed by the Education Department 18 years later. In furtherance of Technical and Industrial Education, the staff of the Mayo School of Art, opened in 1875, was strengthened by the appointment from England of a Vice-Principal. The Railway Technical School at Lahore was opened in 1889, and has been attended with marked success : courses of instruction were prescribed for Industrial schools and rules framed for the award of grants to aided Industrial schools. The Aitchison College, known at first as the Punjab Chiefs' College, was established in 1886, and its success evidences the appreciation of a good education among the Chiefs and gentry of the province. The rules of the department were incorporated in a Punjab Education Code which became a compendium of the whole educational system of the province. The Middle School Examination was made over to the University in 1884, having hitherto been conducted by the Educational Department, but this step has since been retraced. **Progress to 1892.**

634. Quiet but speedy progress continued during the next decade. The reorganization of the Educational Department increased the attractions of the service generally. Superior and subordinate services were established, the former consisting of the Indian Educational Service recruited from England and of the Provincial Educational Service recruited in India. The extension of the system of school post offices added small allowances to the meagre pay of the village school master. The adoption of the science and clerical and commercial courses for High Departments broadened the scope of educational activity. Elementary agriculture, practical mensuration and land records were introduced into the school courses, and special attention was devoted to physical training, school singing and drawing, to object lessons in primary schools and needlework in girls' schools. In European schools, in the interests of efficiency, the system of basing grants on the average attendance was **Progress to 1902.**

introduced instead of on examination results. It was found possible to improve the quality of the teaching staff by raising the standard for admission to the Central Training College to the Intermediate and B.A., respectively, for the Junior and Senior English Classes. A manual on school method was prepared for Normal Schools and the Kindergarten system introduced into the course of study at such schools. Stipends were provided for girls who had passed the Entrance Examination and wished to undergo training as teachers. Elementary standards in common handicrafts were adopted for use in the industrial sections of aided indigenous schools and more elaborate courses in repoussé work, tin work, &c., for advanced technical schools. The status of the Law School was raised to that of a College. The University Sports Tournament was organised. The Inspecting officers were released from the duty of holding Lower Primary and Infant Standard Examinations and were enabled to look more closely into the organization, discipline and management of schools. The process thus begun has since been greatly developed.

Progress to 1912.

635. In the last ten years progress has been rapid and continuous. In 1904 a sixth Circle of Inspection was formed and a second Inspectress and two Assistant Inspectresses of girls' schools were appointed, while, to permit of a more thorough supervision of primary education Assistant District Inspectors were appointed in the majority of districts. Subsequently in 1908, to bring the work of the Department into closer touch with the administration and to enable Commissioners to discharge their growing responsibilities in regard to education satisfactorily, the Circles of Inspection were abolished and Inspectors appointed to each administrative division; the Inspector of European Schools assisting in the heavy Lahore division. In 1904 it was decided to bring back under departmental control and employ as a model for the other schools of the district the secondary schools at district head-quarters, the management of which by the municipal committees had been far from satisfactory, and a beginning has been made in the recovery of the leeway lost by years of neglect and starvation. The change has had a beneficial effect on the development of higher education. The action taken in the province upon the Indian Universities Act of 1904 is noticed elsewhere. The affiliation to the University of the Central Training College and the institution of the degree of Bachelor of Teaching were measures calculated to improve the qualifications of the teaching staff of the province. The abolition in 1905 of the Middle School Examination in Anglo-Vernacular Schools, though adopted in the best interests of education as freeing secondary education from the domination of a public test, was accepted by many educationalists with much misgiving as throwing too much responsibility on Head Masters who were charged with the decision whether a boy should proceed to the High School or no. The approval of the Inspector is, however, still necessary. This reform, together with the abolition of the upper primary examination in all schools, has given much relief to the inspecting staff. As a consequence grants to aided schools on individual results were abolished and block grants on the average attendance of the previous five years substituted. The Middle Examination in vernacular schools, in which further education is not provided except in the Oriental College at Lahore, has been of course retained. The conduct of the examination was retransferred in 1906 from the University to the Education Department.

The system of zamindari schools introduced in 1886 had proved a failure principally because the schools did not lead to higher education, a fatal defect where education is not as a rule sought as an end in itself; and a scheme of "rural" primary schools has been introduced, from which this defect is removed, more suited to the needs of the agriculturist than ordinary or town primary schools. The zamindari schools have been gradually merged in these "rural" schools. There is, however, no room in the country side for two types of primary school and the two courses are now taught in the same school. Since 1905 an enormous impetus has been given to primary education by the large recurrring grant for the purpose made by the Government of India, and 700 new primary schools were opened in that year, but how far the province is as yet from the goal of free and universal primary education is shewn by the calculation that the cost of such a measure, includ-

ing the inspecting agency and provision of normal schools, would be little less than a crore of rupees. In fostering primary education at present Government cannot afford to dispense with private effort, and the encouragement of such enterprise is one of the principles of education policy. Not the least remarkable development in a decade of progress has been the advance made by female education. Indications are not wanting that the prejudice against teaching girls is breaking down, though it would be idle to maintain that there is any enthusiasm as yet. Female education is *par excellence* the field for private effort. A considerable amount of teaching is afforded privately behind the purdah, and the problem of systemising this zanana teaching is engaging the attention of the Department. The Victoria May and Convent Schools for Indian girls at Lahore were opened in 1908. The idea of the former was originated in 1906 in honour of the then Prince and Princess of Wales. It has since developed into the Queen Mary College, a counterpart for girls of the Aitchison College for boys. The want of teachers, irregular attendance and premature withdrawal from school are great obstacles to progress. To meet the demand for trained teachers, a Normal School for Women was opened in Lahore in 1904. The education of Muhammadan girls suffers from the special disability that Urdu is neither their mother tongue nor the language of the religious books of the pupils.

For many years engineering classes were maintained by the University at the Mayo School of Art and served a limited though useful purpose. These were taken over by the Department in 1905 as a Government School of Engineering: the size of the classes was subsequently reduced and a competitive entrance examination, conducted by the Public Works Department, introduced with the effect of considerably improving the instruction given. The school has now been transferred to Rasul at the Headworks of the Lower Jhelum Canal and placed under the control of the Public Works Department. Progress is also marked by the creation of chairs for chemistry and biology at the Government College in 1906 and the transfer from the Medical to the Arts Colleges of the course in elementary science. Uniformity has been secured by the adoption in 1909 of the financial year as the school year. And in 1910 the dates of all examinations, except the Entrance, were shifted from March to May, to secure a longer cold weather term for lectures and to make it possible to end the University year at the beginning of the summer vacation. In the domain of education of Europeans it is the policy of the Department to encourage the amalgamation of schools of the higher grade, with a view to economy of teaching power. It is desired that secondary education should be obtained, as far as possible, in boarding schools situated in the hills, and that each station in the plains, where there is a sufficient number of European children, should have a primary school under competent teachers, Lahore alone retaining high schools for its large European population. This ideal is not likely to be entirely realised in the immediate future, but steps are being taken towards attaining it.

PRESENT CONDITIONS.

Organisation of schools for general education.

636. Schools for general education, whether departmental or aided, are classified as Vernacular or Anglo-Vernacular, and as Primary or Secondary. Primary Schools afford a course of instruction extending over five years. There are five classes, of which the first three are Lower Primary, and the fourth and fifth Upper Primary classes.

In the Lower Primary section of both Anglo-Vernacular and Vernacular Schools there is a uniform course of study, which includes Vernacular Reading and Writing, Arithmetic, Object Lessons, and Elementary Geography, with Needlework for girls. In the Upper Primary section the subjects of study are the same in both kinds of schools, with the exception that in place of English in the Anglo-Vernacular Schools the Vernacular Schools have Mensuration, Native Accounts, and Book-keeping. In Girls' Schools less Arithmetic is required, and some special Readers are prescribed; but the classification and standards are generally similar. Scholarships tenable in the classes of the Middle Depart-

ment are awarded by districts on the results of an examination held by inspecting officers. Secondary Schools are either Middle Schools or High Schools. A Middle School usually contains a Primary and Middle Department, the Primary Department consisting of the five classes of an ordinary Primary School, and the Middle Department of an extra course, extending over three classes. A High School usually embraces a Primary, Middle and High Department, the first two corresponding to a Middle School, and the last having a course of two years, and terminating with the Matriculation Examination. In many cases now however the Primary Departments of High Schools are being separated off as District Schools. The above system of classification is obligatory in Government and Board Schools, and has been generally adopted in Aided Schools. The subjects of study in the Middle Department include English in the case of Anglo-Vernacular Schools, and also a Vernacular Language, Arithmetic, Geometry, Algebra, History, Geography, Persian, Arabic or Sanskrit, and Elementary Science. The course of study for Vernacular Middle Schools terminates with the Vernacular Middle School examination, which is conducted by the Education Department. Scholarships tenable in the classes of the High Department are awarded on the results of the Vernacular Middle School Examination and a special scholarship examination for Anglo-Vernacular Schools. The course of instruction in High Departments embraces the subjects prescribed for Middle Schools, but carried to a higher stage and taught through the medium of English. On passing the Matriculation Examination students are admitted to the Arts Colleges.

Secondary Schools in the Punjab unlike those in some other provinces include Primary Classes, but a satisfactory dividing line is not easy to draw. The teaching of English properly belongs to the secondary stage, but is begun in the Upper Primary Classes of Anglo-Vernacular Schools in the Punjab. Vernacular Middle Schools are in some respects merely advanced Primary Schools, while in the teaching of Oriental classical languages they may be properly termed secondary.

The Entrance or Matriculation Examination serves two purposes: it is at once a "school final" examination and a test for admission to a University course. Much has been said about the evil of a University examination "dominating" the school curriculum, but the existence of such an examination does not obstruct the work of a teacher who has higher ideals than pass percentages; such a teacher can both educate and pass his pupils. The Vernacular Middle Examination is practically the school final on the Vernacular side, as there is practically no Vernacular education beyond this stage; it is also a test for admission to the Normal Schools. Constant efforts are made to convert existing Vernacular Middle Schools into Anglo-Vernacular Schools, owing to the high commercial value of a knowledge of English. This has steadily to be resisted as the Vernacular Schools are a necessity, if only to secure teachers for Primary Schools: but educationally too this change is undesirable. Pupils in Anglo-Vernacular Schools pick up a smattering of many subjects, while those in Vernacular Schools know a few subjects thoroughly and are well grounded, and it is common experience that among the best pupils of the Secondary Schools are those who have first received a sound Vernacular education and have taken up Anglo-Vernacular studies afterwards in the special classes of the Anglo-Vernacular Middle Schools. The two years lost in the process are however a serious obstacle to this course and all aided Secondary Schools are of the Anglo-Vernacular type.

Private Schools.

637. Private schools are those schools which are not recognised by the department. They are of four kinds—(*a*) elementary schools, teaching a Vernacular, many of which are annually brought on the grant-in-aid list; (*b*) schools teaching religious books (chiefly the *Quran*) by rote; these are a very numerous class; (*c*) Mahajani schools, which train children of the mercantile class for shopkeeping; and (*d*) advanced schools, teaching Arabic, Persian and Sanskrit. Every effort is made to bring private schools under departmental influence. The provisions of the Code relating to the recognition and aid of indigenous schools are sufficiently elastic; but the majority of the

schools are so limited in scope as to be outside any scheme of general education. Private schools are steadily declining in numbers from various causes, though girls' schools are becoming more numerous.

Arts Colleges.

638. There are eleven Arts Colleges—the Oriental, Government, Forman, Dayanand, Islamia and Dayal Singh at Lahore; St. Stephen's, Delhi: Khalsa, Amritsar; Murray, Siálkot; Gordon, Ráwalpindi; and Hindu, Delhi. Six other colleges in Kashmir, Patiála, Bahawalpur, Kapúrthala and the North-West Frontier are affiliated to the Punjab University. The tendency of the student population is to gravitate to Lahore and the close vicinity of Lahore colleges to one another and to the University buildings affords more favourable conditions than can be found elsewhere in India for the growth of a University spirit and the reproduction of the academic atmosphere of the older Universities of the West.

Training institutions.

639. The chief institutions in the province for training teachers for boys' schools are, as before, the Central Training College, Lahore, which trains teachers for Secondary Schools, and the five Normal Schools situated at the centres of divisions, which train teachers for Primary Schools. To these have been added recently various training classes attached to Vernacular Middle Schools, for training teachers who have completed the Primary School course and are sufficiently qualified to be employed as assistants in Primary Schools. Women teachers are trained in the Kinnaird High School for girls and other Secondary Schools, as well as in the Normal School for Women, Lahore. St. Bede's College, Simla, trains women teachers for European girls' schools, and men teachers are trained in a Government institution at Sanáwar which was opened in April 1907.

The Central Training College is affiliated to the University and prepares candidates for the degree of Bachelor of Teaching. The Central Model School at Lahore is the practising school for the College and also for the Lahore Normal School and is the only practising school in the province of the High School grade, those attached to the other Normal Schools being of the Primary grade.

Industrial Schools.

640. The object of the Industrial Schools at present established in the province is to give the young artizan some education, while detaching him as little as possible from the workshop, it being common experience that when a workman's son attends school at all it is almost always with a view to abandoning his hereditary pursuit. A course of study is prescribed, embracing reading, writing, arithmetic, geography and drawing, together with some suitable handicraft. Exclusive of the Railway Technical School at Lahore which is maintained by Government and has an attendance roll of over 400, eight Industrial Schools for boys are maintained by municipalities or district boards. Aided Schools maintained by Missionary bodies, the Arya Samaj and like institutions receive grants-in-aid based on industrial tests conducted by the Mayo School of Art. Such as they are the public schools have attracted a fair attendance: most of the children attending belong to industrial classes and most have subsequently taken to industrial occupations. The schools are, however, capable of improvement as competent technical teachers have not hitherto been the rule. The classes in Art industries attached to the Mayo School of Art at Lahore are, however, undoubtedly successful and a development of the teaching department of this Government institution to supply specially trained craft teachers is under contemplation. A committee was appointed in 1911 to draw up a scheme of industrial education for the province and has submitted a report.

Reformatory School.

641. The Reformatory School instituted under Act VIII of 1897 is at Delhi and is in the charge of a Superintendent under the control of the Director of Public Instruction. The training is of a practical kind: all the boys' clothing and furniture is made up at the school and all the shops turn out marketable articles, which find a ready sale. The industrial work is tested annually by the Principal of the Mayo School of Art. The standard of general education is that of elementary schools, two hours daily being allotted to class work. Moral and religious instruction is given and the boys have drill, gymnastics and games.

Commercial Training.

642. Commercial and clerical training is limited to the teaching of shorthand, type-writing, précis, book-keeping and commercial geography and is imparted in classes attached to the Government Schools at Lahore, Delhi and Ferozepore; in the Government Clerical and Commercial School at Amritsar and in the Young Men's Christian Association and Young Women's Christian Association Continuation Classes at Lahore. The schools ordinarily prepare boys for the special University Examination.

Technical Education.

643. Technical education, meaning by that the training of a mechanical engineer and specialised scientific training for particular trades, can hardly be said to exist as yet, and it is doubtful whether in view of the smallness of the industrial concerns and modest scale of salaries in the Punjab the time has come for an ambitious scheme of technical education. More hope seems to lie in the direction of improving crafts and small industries through the agency of craft schools and otherwise.

The Mayo School of Industrial Art, Lahore, contains four departments,—one for elementary training in industrial work and drawing, a second for advanced industrial training, and the others for training draftsmen and teachers.

Professional Colleges.

644. In addition to the Training College for teachers the Professional Colleges are the Law, Medical and Veterinary Colleges at Lahore and the Agricultural College at Lyallpur. The Government Engineering School at Rasul aspires in time to rank as a college. The Training, Law and Medical Colleges are affiliated to the University. All these colleges are controlled and financed by the Government department concerned or, as in the case of the Law College, by the University.

The Punjab University.

The Punjab University College.

645. The proposal to establish a University at Lahore was recommended by the Punjab Government in 1868. The Governor-General in Council was at that time unable to sanction the scheme. He was willing, however, to allow a grant-in-aid equivalent to the annual income of Rs. 21,000 expected from private sources on condition that, instead of expending the funds in establishing a University or examining body, they should be applied to the extension and improvement of the existing Lahore Government College on the principles advocated by the Punjab Government. The decision of the Government of India failed to satisfy the promoters of the Punjab University, and after further correspondence a compromise was accepted by them as a step towards the fulfilment of their design. The new institution, which was styled "The Punjab University College," was inaugurated by Sir Donald McLeod as President in January 1870. A governing body, called the "Senate," was appointed, and statutes were framed in which the special objects of the University College were declared to be—

(1) to promote the diffusion of European science, as far as possible, through the medium of the Vernacular languages of the Punjab, and the improvement and extension of Vernacular literature generally;

(2) to afford encouragement to the enlightened study of Eastern classical languages and literature;

(3) to associate the learned and influential classes with Government in the promotion and supervision of popular education.

To carry out this policy the University College established an Oriental School and College at Lahore; endowed lectureships, literary fellowships, and scholarships; and held public examinations in the various subjects of study which it was desired to encourage.

Incorporation of the University.

646. The question was revived in 1878 in connection with a movement made on the occasion of the Imperial Assemblage at Delhi on 1st January 1877, and the Secretary of State, on being satisfied that the examinations of

the Punjab University College were of such a nature as to justify that body being entrusted with the power to grant degrees, accorded his permission to the introduction of an Act for the incorporation of a University in 1880. An Act for this purpose was accordingly passed in 1882 as Act XVII of that year, and on 14th October the Punjab University was incorporated and received the power of conferring Degrees for Oriental Learning and Arts. The Viceroy consented to become the Patron of the institution, the Lieutenant-Governor was appointed *ex-officio* Chancellor, and the members of Senate were designated Fellows. Authority was granted by the Act to the Governor-General in Council to empower the University to confer degrees in Law, Medicine, Science and Engineering also when it proved to his satisfaction that the arrangements and examinations of the University were such as to render the conferring of these powers desirable. In accordance with this authority, the power to confer Degrees in Medicine was conceded in 1886, and Degrees in Law and Science in 1891.

Indian Universities Act.

647. In common with other provinces of the Empire, the system of University education in the Punjab was profoundly affected by the labours of the Universities Commission, which visited Lahore in April 1902, and by the subsequent Indian Universities Act of 1904 which came into effect in October of that year. The Senate was strengthened by the infusion of new material, and the reduction of the number of *ex-officio* Fellows and the exclusion of 37 other Fellows to a large extent only affected those who had taken no part in University affairs for several years. The new Senate upon its incorporation constituted provisional Oriental, Arts, Science, Medical, and Law Faculties, pending the regular appointment of the Syndics. The Engineering Faculty was abolished, the subject being treated as a branch of Science. The Faculties have the privilege of adding to their numbers graduates in the Faculties and specialists. The Syndicate, after reconstitution, was smaller by four than before the changes. Its work has considerably increased chiefly in connection with affiliated colleges. Eighteen Boards of Studies representing different subjects or groups of subjects have been formed to determine objections raised to questions set in examinations, previously the duty of the Syndics in each Faculty, to suggest examiners to the Syndicate, to recommend courses of study and reading and to act generally as consultative bodies to the Faculties. Of other subordinate Boards the Board of Accounts was left unaltered, but the management of the Oriental College was taken over directly by the Syndicate and of the Law College by the Law Faculty.

Before the passing of the Act no system of affiliation existed in the Punjab University, colleges being "recognized" only. Affiliation became necessary under the Act and all the colleges previously recognised applied. Committees of inspection were appointed to report on the condition of these institutions and found it impossible to adopt any standard of efficiency that could be regarded as at all permanent without excluding the great majority of the institutions inspected. In the end the compromise was adopted of granting affiliation in every case, but the Syndicate required certain improvements to be effected as a condition of the continuance of affiliation.

The revision of the regulations was a consequence of the new Act and was expeditiously carried out. Two new degrees—Bachelor of Teaching and Master of Science—were instituted, the latter a further step in the gradual creation of a highly specialised Science side of instruction. Degrees of Bachelor of Laws and of Medicine and Surgery replaced the Diplomas of Licentiate in these two subjects; and the Oriental Examinations in Law and Medicine long in abeyance were removed from the regulations. Honours papers were instituted in the B.A. and B.Sc. Examinations, but special lectures were not at first required.

Inter-collegiate rules affecting latest dates of admission to classes and transfer from one college to another had previously been adopted by the Syndicate as a condition of recognition and now became binding on every

affiliated college. Every University student is now registered and his college career recorded. The registered number is used instead of the name in the list of candidates supplied to the Examiners.

The reorganization of the University has fitly been marked by the provision in 1905 of a new University Hall, with Syndicate and committee rooms, consonant with the dignity of the Foundation. Collegiate education in the province is on a high level and the standard is steadily rising in spite of the difficulties caused by the low standard of English education in the schools. The closer supervision of colleges by the University, through its inspecting committees, has had a beneficial effect and the colleges have made loyal efforts to meet requirements, aided by the distribution of liberal grants from Government. In only rare instances has it been necessary for the Syndicate to consider the advisability of adopting the extreme measure of disaffiliation in order to secure efficiency.

GENERAL.

General.

648. The departmental inspecting staff under the Director now consists of six Inspectors (one of whom is responsible entirely for European schools), 11 Assistant Inspectors, 27 District Inspectors and 24 Assistant District Inspectors, also a Senior Inspectress of Girls' Schools, with general supervision throughout the province, assisted by a Junior and two Assistant Inspectresses. The appointment of qualified Assistant Inspectresses for each division is under consideration. The most pressing needs at present are new buildings for Government High Schools, boarding houses for secondary schools generally and qualified teachers for primary schools. The problem of primary education, however, is perhaps the most difficult one before the authorities. It is the policy of Government to slacken departmental control of primary education even at some expense of efficiency, as too rigorous control is incompatible with the existence of any lively feeling of interest in local administration. Village school committees languish, but reliance is placed on the development of grants-in-aid to private institutions to bring into being useful bodies. In education, however, as in medical relief, the tendency is prevalent for the well-to-do to appropriate to themselves public services intended to be gratuitous or cheap to the poor and needy only. The general attitude towards education is typified by the continual pressure exercised by the public for the lowering of examination standards. Little wonder that education is popularly understood to be the learning of set text-books by rote and that the development of reasoning power is hardly considered. Even among teachers the duty of paying attention to the development of character and moral stamina has little practical recognition. Sentiment, unbacked by supposed material advantages, has small influence. The Gurmukhi Schools gain little if any thing in popularity, and there is no disposition to start them under the grant-in-aid rules. Until the demand for Punjabi becomes strong and articulate there can be no question of making this language compulsory.

Text-Book Committee.

649. The Text-Book Committee is charged with the task of supplying suitable text-books to the schools, a work of the utmost importance and no little difficulty. In 1905-06 a Text-Book Revision Committee was also appointed with a grant of Rs. 20,000 to bring up to date revision work which had fallen into arrears. The Committee itself obtains funds from the 10 per cent. of the price of all books published, which is payable by the contractors. A further function of the Committee is the distribution of the patronage of Literature Fund in grants to authors for the encouragement of Vernacular literature. In spite of this encouragement the literary output in Punjabi shows little signs of development.

54. Education.

GENERAL SUMMARY.

General conditions.

650. The report submitted this year by the Director is a quinquennial one, dealing with the period 1906-07 to 1911-12, and affords a survey of the progress made during the last five years. Generally speaking, there is a

growing demand for school education in all parts of the province, the advance being particularly marked in girls' schools and secondary schools. At the same time there are still large sections of the population which remain practically unaffected by the educational movement. Some of the statistics of literacy given in the latest census report, which relate, it should be said, to the Punjab States as well as to British territory, illustrate the magnitude of the task of educating the low-caste population. Four criminal tribes number 67,088 persons, of whom only 200 are classed as literate. *Mochis* number 1,564 literates out of a total of 417,230 persons; *Musallis* 207 out of 309,530; *Chuhras* 1,290 out of 925,053, and *Chamars* 4,219 out of 1,106,589. In the case of these four castes, therefore, only 7,280 people can read and write out of a total of 2,758,402, and many more instances could be cited. There is evidently a vast field here awaiting educational development.

The supply of funds has not kept pace with the rapidly increasing demands. The liberal recurring Imperial subsidy, granted in the previous quinquennium, had spent its force and no new Imperial grants were sanctioned until the close of the period under report. Provincial finances were passing through a period of severe stress, and the amounts allowed were until the year 1911-12 barely sufficient to meet the sanctioned recurring charges. Whatever additional local funds could be spared were absorbed in raising the pay of teachers, the establishment of provident funds and the provision of buildings. In the circumstances a slackening of the rate of expansion was inevitable.

651. Notwithstanding the unfavourable conditions progress is reported under every head; and a number of changes—administrative and otherwise—have been introduced. Endeavours have been made to simplify the working of the departmental machinery, to systematise the financial arrangements, to strengthen the position of inspecting officers, to free inspection work from the trammels of routine, to attract a better class of teachers to the schools, to recast the courses of study, and to make the institutions directly controlled by the Department as efficient as possible. The University has replaced broken periods of work by a continuous lecturing session, and the school arrangements have been harmonised by the introduction of a uniform school year. The Agricultural College, Lyallpur, Queen Mary's College, Lahore, and the Sanáwar training class for European teachers have been added to the institutions directly controlled by Government. The Government Engineering School has been remodelled and established in new buildings at Rasúl. The Government College has been placed in possession of a chemical laboratory adequate for its needs. With the aid of the Imperial grant for buildings the construction of school and other educational buildings has been undertaken on a large scale throughout the province, and standard plans have been issued by the Department for guidance. The grant-in-aid system has been made simpler and more liberal, and the rates of stipends in training institutions have been raised. The finances of European schools have been placed on a sound basis. A greatly increased income for the Text-Book Committee, together with more favourable terms for the schools, has been secured by a new contract. **Progress.**

652. The following statement gives the numbers of schools and colleges and the attendance returned for the public institutions of the province in 1911-12 :— **General statistics.**

	Males.		Females.	
	No.	*Attendance.*	*No.*	*Attendance.*
Arts Colleges, English ...	10	2,539	...	...
Ditto, Oriental ...	1	120	...	...
Professional Colleges ...	6	860	2	30
High Schools ...	101	47,662	16	1,683
Middle Schools ...	211	45,521	36	4,552
Primary Schools ...	3,417	179,588	637	29,091
Schools for special instruction	31	3,237	25	1,284

There has been an improvement in the number of public institutions of all kinds. The increase compares favourably with the increase in the previous quinquennium except in respect of primary schools, which had been greatly added to during the years 1902—1907 by means of the Imperial grant. An increase in attendance is distributed among all kinds of institutions, amounting to 68,646 in the case of males and 12,626 in that of females, a substantial advance on the figures of the previous quinquennium. The percentage of attendance in public institutions to the estimated population of school-going age rose from 12·8 to 16·9 in the case of males and from 1·7 to 2·7 in that of females. It is noted that during the last 30 years the above percentage has risen in the case of males from 6·5 to nearly 17 per cent., whereas the proportion of the male population classed as literate has during the same period only risen from 6·2 to 6·3 per cent. The explanations suggested are that some exodus of the educated classes takes place, that much greater strictness is employed in the interpretation of the term literacy, and that much of the instruction given in primary schools is soon forgotten. Classified by religions the percentage of the total male population receiving education in public institutions is among Hindus 3·6, among Sikhs 3 and among Muhammadans 1·8. As regards private schools, the statistics of which are admittedly incomplete, it would appear that boys' schools at any rate are gradually being absorbed into public schools.

The total expenditure on education in public institutions which was Rs. 51,96,890 in 1906-07 rose to Rs. 68,64,909 in 1911-12 or by 32 per cent. The figures, of course, are for the individual years. Fee receipts and expenditure from private sources each increased by over 50 per cent., and expenditure from district funds, which includes the fixed Government grant to district boards, by nearly 30 per cent. The provincial expenditure in 1911-12, Rs. 22¾ lakhs, was Rs. 4 lakhs higher than in 1910-11. Compared with the year 1906-07 the increased expenditure went on the Medical, Agricultural, Training and Government Colleges, on the Government Secondary Schools, on boarding houses and on aided colleges and secondary schools.

Primary Schools (Indian Boys).

Present conditions.

653. There has been an increase during the quinquennium of 263 primary schools and of 37,934 pupils in such schools, the numbers now being 3,413 and 179,465, respectively. The expansion has, owing to want of funds, not been so rapid as in the previous quinquennium, but it is satisfactory. The total direct expenditure amounted to Rs. 8,76,375, an increase of Rs. 2,36,943, of which increase Rs. 1,89,481 were contributed by district funds. Fees defray 11 per cent. of the total expenditure. Elementary education in the rural districts is largely free. It is calculated that in the district board schools the average number of pupils is approximately 51, and the fee receipts average Rs. 2 monthly. Two-thirds are probably free pupils and the rest pay less than two annas monthly. This small payment made by some of the non-agriculturist parents represents a cess such as is already paid by the agriculturists in another form.

Education of agriculturists.

654. Since the new "rural" schools which superseded the "zamindari" schools were linked with the middle school their popularity has increased, but it is doubtful if the "rural" school curriculum appeals to the zamindar or is better for agriculturist boys than the "town" primary schools. Generally speaking, about half the pupils in village schools belong to the cultivating classes. Complaint is still made that the village school unfits its pupils for field life afterwards; but that is probably due as much to the ill-developed condition of agricultural practice, which necessitates no education, as to the school curriculum. Among the agriculturists of the north the advantages of education in the army are recognised, and their boys are being sent to school in increasing numbers. In the province generally, however, the agriculturist still stands aloof.

Teachers and accommodation.

655. The increase in the number of trained teachers does not keep pace with the increase in schools, only 42 per cent. of the teachers employed in primary schools (including girls' schools) having undergone training. There has been much leakage in the past from the training schools into other professions, which can only be stopped by making the teacher's profession more attractive. Some advance is being made in the provision of school accommodation, but in too many cases the accommodation is either inadequate, uncomfortable or insanitary.

Aided schools.

656. Little progress has been made with aided elementary schools, but such schools, especially when they are managed by responsible agencies, are a useful adjunct to the board school system, and a substantial increase in the rate of grants-in-aid has now been sanctioned in the hope of fostering such schools.

Gurmukhi.

657. The Punjabi language is an optional vernacular in rural schools, but shows little sign as yet of replacing Urdu. The number of Gurmukhi-teaching schools has risen from 32 to 102; chiefly in the Multán division: and the attendance from 917 to 4,067.

Preparations for the future.

658. In anticipation of further subsidies being allotted from Imperial funds, a fully worked out scheme for the expansion of elementary education has recently been submitted to the Government of India: such a scheme secures a more satisfactory disposal of the money allotted. With the same object in view various preparatory measures have been adopted; the most important of which are the introduction of a system of proportioning the grants made to district boards for primary education on the basis of teachers' salaries, the establishment of provident funds for teachers, and the opening of training classes at vernacular middle schools to supplement the existing normal schools.

Stages of education.

659. The number of boys in the lower primary classes, practically four in number, inclusive of those in the primary classes of secondary schools, is 191,608. In the two upper classes it is 47,015, whereas at least 75,000 might be expected. The inference is that a large number of boys do not at present get beyond the lower primary stage, and only receive a smattering of education. About half the boys who finish the course in vernacular primary schools go on to the secondary schools.

Secondary Schools (Indian Boys).

Number of schools and attendance.

660. The number of schools is now 303, and in the last five years attendance has risen by 46 per cent., and now numbers 92,273. Of the total, vernacular middle schools number 118, with an attendance of 22,232. Secondary schools, however, give primary education to about 59,000 boys, forming nearly two-thirds of the total number, and this fact vitiates comparison with the figures of those provinces where secondary schools have no primary departments. In the secondary classes there are some 33,000 boys, equal to about 3 per thousand of the male population. The Government High Schools have gained much in popularity and efficiency since the transfer from municipalities. The net cost to Government averages about Rs. 6,000 apiece per annum. The total expenditure has risen by 50 per cent, and is now Rs. 17,64,186, of which Rs. 9,53,587 were contributed by fees and Rs. 3,57,425 from provincial revenues. A revised scale of fees came into force from 1911, increasing the rates by 20 per cent. annually for two years in succession. The enhancement was accompanied by an increase of the fee concessions to poorer pupils and of the minimum limit of income for parents paying double fees. The higher grade fee is justified by the fact that comparatively rich people avail themselves of the cheap schools financed largely by the State and do not send their children to schools independent of State aid. The percentages of passes in the Matriculation and Vernacular Middle School examinations show little variation: the number of candidates for the former in 1911 was 3,203

and for the latter 1,997 : on the science side of the Matriculation Examination there is a large increase in candidates, who numbered 191 in 1911 with 139 passes.

Buildings.

661. The total expenditure on buildings was Rs. 9,95,872, including primary schools. The recent improvement in provincial finances, coupled with an imperial grant for educational buildings, has permitted of progress being made. It has become possible to take in hand suitable buildings for the Government High Schools, most of which are unsuitably housed—a legacy from the days of municipal control. Those at Jullundur, Gujrat and Campbellpur have already been completed. Standard plans have been drawn up, and building projects invited from School managers and local bodies, and in short an extensive building campaign has been inaugurated.

Private enterprise.

662. Private enterprise is conspicuous in secondary education. The Arya Samaj and the Sikh community have displayed considerable energy in founding and conducting schools, while the Anjumans and Christian Missions have been less prominent. New grant rules have been issued under which aided schools will be able to earn considerably higher grants in future, provided that they increase their expenditure, and will have greater inducement to raise teachers' salaries. Unrecognised secondary schools are occasional only. Of late, however, seventeen middle schools of this class have sprung up in Hoshiarpur. The competition of such ill-taught and ill-managed schools, which is bound to affect education unfavourably, is exceptional as yet in the province.

Hostels.

663. The number of hostels of all kinds increased by 21 per cent. and the number of boarders in the case of secondary schools rose to 12,213. Almost all secondary schools have hostels of some kind attached to them, and there is a welcome tendency to establish denominational hostels under the control of religious societies. In the Government hostels Government provides the building, furniture, Superintendent and servants, and the boarders the lighting and cooking arrangements. A small fee, usually 8 annas or a rupee a month, is charged for the use of the building.

Quality of teaching.

664. Although the number of secondary schools and of pupils in these institutions shews a satisfactory increase, the quality of the instruction still leaves something to be desired. The chief fault found with the teaching is its unreality and its divorce from observation and experience. The general scheme of studies has for some time past been considered unsatisfactory, and after much consideration and careful criticism a completely new scheme was worked out and is now being issued. The supply of qualified teachers, though rising, is not keeping pace with the growing demand. Fifty-four per cent. only of the teachers employed are trained men, and graduates only average for High Schools about three apiece. Weak headmasters, incompetent assistant teachers and buildings which are a menace to health are far too common. On the subject of improving the quality of the schools public opinion is still dormant, and the prevailing tendency is to extend secondary education to the greatest number regardless of the conditions under which it is given.

Collegiate Education.

General.

665. The number of students in Arts Colleges rose by 66 per cent. to 2,659 ; 81 per cent. of whom read in Lahore Colleges, the expansion of the last few years having been unusually rapid. The number of candidates appearing in the several examinations was 1,602. Expenditure has risen by 59 per cent., and now amounts to Rs. 4,09,562.

The number of students taking science has greatly increased, due to the transfer of preliminary science teaching from the Medical to the Arts Colleges and to the fact that the Intermediate Science course is a preliminary to entering the Medical College. Marked improvement has taken place in the general equipment of the Colleges teaching science, and nine of the colleges have secured new laboratories during the quinquennium. A model laboratory

has been constructed at the Government College at an expenditure of Rs. 76,278, and a large part of the Imperial grant of Rs. 1,40,000 for collegiate education has been devoted to the improvement of science teaching. The provision of main buildings has also been taken in hand, no less than six of the colleges having constructed new buildings.

Aided Colleges.

666. The system of grants to aided colleges has been altered. They now roughly correspond to the expenditure on tuition met from private sources other than fees, and are periodically reassessed. Very considerable enhancements were the result. The new grants are to be spent on the improvement of staff and equipment.

Improvements.

667. Individual colleges are adopting methods of their own for keeping the students to a high ideal of work. The tutorial system has been very largely adopted, and the practice of withholding promotion to 1st and 3rd year men who have done poor work has had good results. With the introduction of new subjects and honours courses (1909) it is becoming clear that a single college cannot maintain a full staff of teachers for every subject, and an extension of the system of inter-collegiate lectures is desirable. The co-operative spirit of the colleges has greatly developed with the encouragement of athletics, and the staffs are fully alive to the desirability of further improvements in this direction.

Training Institutions.

Central Training College.

668. Considerable changes have been introduced in recent years in the Central Training College with the object of obtaining a better class of students and adapting the courses to the requirements in each class. The results have been most encouraging. The numbers have risen to 229, and over a hundred applicants were refused admission this year for want of accommodation. During the last five years the College sent up 884 candidates for various examinations, of whom no less than 805 were successful.

Normal Schools.

669. Owing to the demand for teachers it had been found impossible in practice to keep men for the full two years' course prescribed in the Normal Schools, and a simplified course for one year's work has been introduced. With the abolition of "zamindari" schools, the special class for teachers for these schools has been abolished. The improvement in the pay and prospects of primary school teachers has had a marked effect in attracting candidates, and selection is now for the first time possible. The practising schools attached to the Normal Schools are popular and well attended.

Training classes in connection with Vernacular Middle Schools are being instituted in some districts with a view to improve the qualifications of assistant teachers in village schools who are employed in teaching lower primary classes. The training lasts for six months, and is extremely useful as a temporary measure, though in no sense a substitute for that given in the Normal Schools.

The Normal School for Women at Lahore does not attract candidates, and the attendance is 20 only. Experience shows that reliance must be placed on local training classes for the supply of trained women teachers. Ten candidates from the Normal School and 19 from training classes in secondary schools were successful in 1912, but the output is very far from meeting requirements.

Training of European teachers.

670. The training at the Sanáwar class for European male teachers has been most valuable. The class consists of 15 students. St. Bede's College, Simla, for women teachers has 30 students on the rolls. Seventeen obtained certificates in 1911. Eighty women teachers trained at St. Bede's are said to be now employed in different parts of India. The training class at the Auckland House school, Simla, was closed in 1911.

PROFESSIONAL AND TECHNICAL EDUCATION.

Law College.

671. The Law College, which is one of the two teaching institutions maintained by the University, was reorganised during the quinquennium, a wholetime staff being appointed consisting of a principal and two lecturers. The expenditure rose to Rs. 24,585, most of which is covered by fees; and the number of students in the English classes to 207. The vernacular classes were abolished in 1909. The examination results have greatly improved. A hostel for the students was started in 1909.

Medical College and School.

672. The number of students in the Medical College was 156 and in the school 322. The Principal attributes the increased popularity of the school to the improvement in the pay and status of Sub-Assistant Surgeons. The examination results in 1911-12 were excellent, 90 out of 106 college students being successful in professional examinations; this is said to be largely due to the institution of test examinations. During the quinquennium the staff was increased by the addition of three professors, three assistant professors and a demonstrator. Of the total direct expenditure on the college, Rs. 1,20,702, provincial funds contributed Rs. 1,01,405 and fees Rs. 12,090.

North India School for Women.

673. The North India School of Medicine for Women at Ludhiána has a strong staff of lady doctors and numbers 38 medical students from different parts of India, in addition to others in training as compounders, nurses and dais. In 1911 a maintenance grant of Rs. 6,000 a year was sanctioned by Government towards the salaries of the teaching staff and a grant of Rs. 50,000 was made for buildings.

Yunani and Vedic Schools.

674. There were 130 students at the Delhi Madrassa-i-Tibbia and 44 in the Vedic class at the Daya Nand College, Lahore. There is also a class for Yunani medicine at the Islamia College, Lahore. Modern surgery and the property of common English medicines are said to be taught at Delhi.

Punjab Veterinary College.

675. Sixty-four men were admitted to the Veterinary College in 1911; of these 16 had passed the middle school examination. The military services, other provinces and States furnished 54 fresh men, and only 10 civilian Punjabis could be admitted. In the examinations 78 per cent. were successful in the first year, 80 per cent. in the second and 74·6 per cent. in the final year. The examiners reported that the results are not yet satisfactory, and that the standard is far too low, as evidenced by the percentage of marks obtained. The instructional work suffered severely by the sickness of Mr. Gaiger, who became infected with glanders, and the death of his successor Mr. Carless. But want of accommodation and lack of patients for practical work were also contributory causes. The demand for graduates is very great. Selection of Veterinary Assistants for the Civil Veterinary Department is at present impossible, and there are evident signs that the unfit are being recruited. The policy of Government is to enlarge the classes and to introduce a post-graduate course. To this end an increase in the number of European Professors has been sanctioned. The old site is much too confined for the expansion that is desired, and its position in the centre of a thickly-populated neighbourhood is undesirable. A fresh site has now been selected, and work will shortly be begun on the new buildings. Fears are expressed that at the new site the number of patients will be still further reduced, but it may be possible to arrange for practical instruction at the agricultural stations at Lyallpur and Gurdáspur. Of the direct expenditure of Rs. 73,404, Rs. 35,714 were contributed by provincial revenues, Rs. 30,069 by the Imperial Government and Rs. 7,621 from fees.

Agricultural College.

676. The classes of the year at the Agricultural College were formed of 10 first-year men, 16 in their second year and 30 fresh entries, of whom 7 subsequently withdrew. In the diploma examination, the first in the college history, eight men were successful and four subsequently obtained posts in the department. The examiners considered that the standard attained was high, but as a result of the experience gained the syllabus is to be modified

with the view of lessening cram and the excessive attention to theory at the expense of practical work. An avenue for the employment of diplomaed students of the college will be opened up by the schemes for the improved farming of the larger Wards' estates which are now being drawn up. A short vernacular course was to be started in October 1912. The post of Assistant Professor of Mycology was abolished during the year, and a temporary appointment of Lecturer in Physics and Mathematics sanctioned. Great difficulty is felt with the first year class at the college owing to the defective knowledge of English possessed by the students. The necessity for instruction in Agricultural Engineering is emphasised. The direct expenditure was Rs. 54,707, of which provincial revenues contributed Rs. 48,117 and fees Rs. 6,590.

Engineering schools.

677. The scheme for a new Government Engineering School at Rasúl (Gujrát) matured during the year, and the classes were moved into the new quarters in 1912. The buildings are of an inexpensive nature, and if the site should ultimately prove to be unsuitable they can easily be removed. They comprise a boarding-house with large recreation-room and dormitories for 100 students, workshops, quarters for the Assistant Principal, menials' quarters and minor buildings. A play-ground has also been levelled and the grounds planted up. The full complement of pupils has been secured without any difficulty. The future of the institution is so promising that it has been decided to put in hand the construction of the main hall, which had been postponed until experience was gained. A staff of good qualifications has been appointed. This change may be ranked as an important development in the history of technical education in the province. The examination results in 1911 were the best on record—47 out of 56 students passing.

The Engineering classes at the Daya Nand College had 94 students and there were 50 in the classes for Mechanical Engineering and Engine Driving at the Victoria Diamond Jubilee Hindu Technical Institute, Lahore.

Commercial training.

678. In the University Clerical and Commercial Examination 29 out of 82 passed. The popularity of the Amritsar school is growing and the number of pupils is now 61. The departmental continuation classes at Lahore were made over to the Young Men's Christian Association and Young Women's Christian Association, which bodies are assisted by grants-in-aid. The attendance in the men's classes was 64 and in the women's 42. The demand for students from the men's classes was in excess of the supply.

Industrial training.

679. The number of students at the Mayo School of Art was 230. Two Assistant Principals have been added to the staff; the courses have been revised, and new departures tried. The scheme for new workshops has at last been taken in hand. The School of Art was entrusted with the responsibility for the decorative work in connection with the Delhi Durbar, no small testimony to the regard in which this school is held. The Principal, Sardar Bahadur Bhai Ram Singh, was in sole charge, and the results of his labours won general admiration. The Railway Technical School, Lahore, continues to prosper, and has now 61 pupils. The total number of industrial schools has risen from 19 to 30 and the attendance from 1,639 to 2,614. Sixty-six per cent. of the pupils belong to the artizan classes, the parents of the others being shopkeepers or of miscellaneous occupations. Though attempts have been made to introduce better looms and better methods, there is as yet no organised system of instruction in weaving in the Punjab. The Department of Industries and the Salvation Army are devoting attention to this important subject.

Committee on Industrial Education.

680. A committee on industrial education was appointed in 1911, which reported that there was nothing radically defective in the prescribed courses of study, but that the industrial teaching was often wanting in life and intelligence, owing to the employment of ill-paid bazar artisans, who not only were ignorant of teaching methods, but had no inducement to inculcate good workmanship. The committee thought that efforts should be made to obtain a superior type of teacher, and that the training of efficient craft teachers in the Mayo School of Art should be a special feature of that institution. Experiments were also recommended in the way of founding schools of particular industries under skilled instructors trained in European methods, such schools not

attempting to give general education, but being virtually workshops. The Bareilly school of carpentry was instanced in this connection. The report is still under the consideration.

Reformatory School.

681. The number of boys at the Reformatory School was 138 ; 37 were admitted and 30 discharged. Of the latter, 17 were released on expiry of term, 6 under section 13 of the Act (VIII of 1897), 6 were transferred to the Chunar Reformatory and 1 to the Central Jail at Lahore. One boy died. The convictions of the boys admitted are mainly under the theft sections of the Indian Penal Code. One boy had seven previous convictions and another three. A profit of Rs. 1,472 from the sale of manufactures was realised during the year. A system of good conduct marks having a money value was introduced during the year with good effect. Only 15 punishments were necessary. A small proportion of boys on discharge follow the trades taught them at school, but the general results of the training are as satisfactory as can be expected. The expenditure from provincial funds was Rs. 27,931.

Education of Indian women.

Number of institutions and attendance.

682. One of the most encouraging features of the quinquennium has been a very marked development of interest in the education of girls, as betokened by an unexampled increase of attendance in girls' schools. The number of public secondary schools for girls rose from 20 to 34, and that of primary schools from 541 to 635, so that there has been a total increase of 108 institutions ; while the number of pupils in these schools rose from 21,769 to 33,820, an increase of 55 per cent. The increase is most noticeable in the higher stages of education, the number of pupils in secondary schools having risen from 1,809 to 4,765, or by 163 per cent. The increase has been mostly in the Lahore, Multán and Delhi divisions. The high schools are all in the Lahore and Jullundur divisions. The total direct expenditure rose from Rs. 1,79,742 to Rs. 3,15,669. The increase was common to all sources of funds. Fees, which are not charged in board primary schools, rose from Rs. 3,757 to Rs. 14,677.

The number of candidates for the Middle School Examination, which virtually ends at present the school career for girls, rose from 54 to 135, and a tendency is evinced in the larger towns to defer the marriages of girls so that they may receive a better education.

Special features.

683. The need of qualified teachers continues to be urgent. In the districts mistresses have little knowledge of teaching methods, as trained teachers easily obtain posts in the larger towns. Among Muhammadans the school language is Urdu and among Hindus Hindi, but Gurmukhi is making progress, as Punjabi is the mother tongue. The multiplicity of tongues makes the text-book problem difficult. Schools maintained by Mission and other religious bodies are generally properly housed, but board primary schools are not well accommodated, and middle schools are usually housed in rented buildings. Very few schools have any space for play grounds. A tendency is noticed to prefer for the sake of show inartistic fancy needlework to plain sewing. Needlework, however, is a great inducement to attendance, as mothers realise the practical advantage of their girls learning to sew and cut out and make their own clothes. Domestic economy is taught, and increasing attention is being paid to giving some practical knowledge of nursing, the laws of health and first aid to the injured.

Boarding Schools.

684. The Victoria May School, which was started in 1908, was re-named Queen Mary's College at Her Majesty's visit in 1911. The school is specially intended for the education of ladies of rank and position. The foundation stone of the new building was laid by Lady Dane on November 14th, 1911. The attendance, which has been limited by the accommodation, stands at 52. Other important boarding schools are the Kanya Maha Vidyala, Jullundur, 325 children ; the Sikh Kanya Maha Vidyala, Ferozepore, 312 children ; the Dev Samaj Balika Vidyala, Ferozepore, 81 children ; the C. M. S. Alexandra School, Amritsar, the Kinnaird High School of the C. E. Z. and Z. B. and M. Missions, Lahore, and the A. P. Mission School, Sialkot.

685. The statistics shew 723 pupils in Zenana classes, which are mostly organized by Missionary societies. In 1911 a number of classes in Lahore city have been started under the management of a strong committee of Indian ladies, and the movement is likely to have important results. Zenana classes.

EDUCATION OF SPECIAL CLASSES.

686. Public schools for Europeans include 9 for boys, 17 for girls and 7 mixed. In pursuance of the present policy the Delhi station and Lahore Railway Schools have been converted into primary schools, and the Lahore Orphanages are being amalgamated with other existing schools. Corresponding efforts have been made to place the secondary schools in the hills on a sounder footing. The financial situation has undergone a great change for the better, and almost every school now has a credit balance. There has been a small increase of expenditure from Provincial revenues and a large increase of fee receipts. The expenditure on buildings was considerably less than the high figures of 1906-07. The number of pupils has risen to 2,539, and the average cost of educating a pupil has been reduced to Rs. 102 per annum. With the aid of an imperial grant improvement has resulted in the pay of teachers and in the staffing of schools. The training classes at Simla and Sanáwar have been another factor of progress. In consequence a great advance is reported in the work of the schools generally and in particular of those in the hills. The Departmental High and Middle Standard Examinations have been made more thorough, and will in time improve the teaching. The results of the examinations indicate the general superiority of the girls schools. The Lawrence Boys' School, Ghoragali (Murree), has been reorganised and opened to the children of civilian parents with the object of providing a boarding school in the hills, for boys of the poorer classes of the domiciled community, and great progress has already been made. Education of Europeans.

687. There is sufficient school accommodation in the province for the comparatively small number of children, and education is attainable at a very moderate cost, thanks to the unstinted efforts of devoted workers and to liberal assistance from Government. There is no class of European or Anglo-Indian children growing up without education for want of school facilities. For the case of the children of poor or improvident parents satisfactory provision can only be made by private charity, such as is afforded by the Anglo-Indian Children's Relief Association and the Punjab Masonic Institute. Facilities for education among Europeans.

688. Of 520 boys, the children of parents coming within the definition of the upper classes, only five boys are reported on as apparently not being educated: evidence that the advantages of education are appreciated by the aristocracy of the province. Education of the upper classes.

689. The number of pupils at the Aitchison College, who belong with few exceptions to the leading families in the Punjab, has increased from 83 to 105. The average age of the boys on admission is 12 years. The Principal considers that there has been during the last five years a distinct improvement in punctuality and regularity of attendance. The instructional condition was favourably reported on by the special Inspectors deputed to visit the College. Three boys entered for the diploma examination, of whom two were successful, one standing second among all the candidates from Chiefs' Colleges. The third passed in the aggregate, and has since qualified in the subjects in which he failed, and has been recommended for a diploma. Three boys who have obtained diplomas attend lectures at the Government College. The financial position is secured by a large subsidy from the Government of India for the salaries of the staff, in addition to one of Rs. 12,000 from Provincial revenues. The necessity for the expansion of the College is not considered to be urgent as yet. Aitchison College.

MISCELLANEOUS.

690. The number of publications dealt with in the quinquennium with a view to recommendation as text-books was 2,258. Of these 351 were recommended for adoption as text-books and 316 for inclusion in school libraries. The production of text-books in English improves year by year; Text-Book Committee.

but in the preparation of vernacular school books private enterprise is yet to develop. The Committee has therefore to arrange to prepare and publish its own vernacular text-books. Forty new books have been issued in the quinquennium and 36 publications have been revised and brought up to date. The importance of good illustrations in books for children is being consistently emphasised. The Committee further provides 25 per cent. of the cost of the production of Urdu translations of approved standard English works by the Punjab Religious Book Society, and "John Halifax Gentleman" has already appeared. The new contract with the Committee's publishers, Messrs. Gulab Singh and Sons, is much more favourable to the Committee and the schools than the one which it replaced, and the royalty is now more than Rs. 20,000 a year. This has enabled the Committee to make more liberal grants for the purchase of books for school libraries, and Rs. 8,000 a year is now provided for the purpose, in addition to the grant of Rs. 1,500 from Provincial revenues. Primary schools are included in the distribution in spite of their large numbers. The Committee further augments a Government grant of Rs. 2,500 per annum by a further sum of Rs. 1,000 for the encouragement of vernacular literature. Forty-one authors sent in original works in 1912. Seven Urdu authors received Rs. 1,500, seven Hindi authors Rs. 1,400 and three Punjabi authors Rs. 600. The Committee's library and museum has recently been overhauled, and the increase in the number of visitors using the library is gratifying. The financial condition of the Committee is most satisfactory. The balance in hand is Rs. 74,036, and the budget estimates for 1912-13 provide for an expenditure of Rs. 29,585.

Conferences.

691. A conference of departmental officers was held during 1911, at which details were worked out regarding the proposed revision of the subordinate educational service, the new system of distributing Government grants to district boards for primary education and a simpler course of study for normal schools. Local conferences of head-masters have been held throughout the province and prove of much use as advisory councils for the Inspectors. They have done much to promote good feeling between schools and to stimulate interest in educational matters. Associations of assistant teachers hold frequent meetings with the object of discussing questions of instruction and descipline.

55. Literature and the Press.

LITERATURE.

Books registered.

692. The number of books and periodicals registered under Acts XXV of 1867 and X of 1890 in the year 1911 amounted to 1,565, of which 52 only are periodicals. These are classified as:—Original works 1,152; republications 221 and translations 192. A curious feature is that as many as 133 of the publications are written in more than one language. Altogether eleven languages are used, of which, however, Urdu, 48 per cent., and Punjabi, 35 per cent., are by far the most usual. English accounts for only 78 and Hindi for 68 of the 1,432 publications which employ one language only. No details of the scripts used are forthcoming, but the Persian, Nagri, Gurmukhi and English are the principal characters.

As usual, a large proportion of the works are educational,—technical and scientific education assuming an increasing share. Such books do not aspire to any literary value. Religion continues to be the dominating subject of indigenous literature. In addition to 297 books classified under the head Religion, the most noteworthy poetical contributions are on religious subjects and several books under biography deal with the lives of religious leaders. It is a sign of the times that efforts are being made by every community to explain the philosophical nature of their respective religious precepts and to bring religious teaching into harmony with modern science. "Din-o-danish" on Islam and "Biyah dharam maram sama lochna" on Hindu marriage are works of this nature. The yearly outturn of verse (491 books) points to facility of metrical expression rather than true poetical talent. After religious subjects the loves and adventures of popular heroes are the favourite subjects. Didactic poetry comes next, with the vanity of human wishes

and the transitory character of the world as its main theme. Poetry of the above nature is much appreciated in the Punjab. Perhaps the best literary work is found under biographies and history, though both subjects cover works of very trivial nature also. Biographies of Sir Salar Jang and the late Nizam by S. Amjad Ali; a life of Nur Jahan by N. Imad Nawaz Jang; a history of Damascus: "Lives of famous Mussalman Women" and a history of Kashmir among original works are of some merit. Translations dealing with the history of Prithvi Raj, of Jahangir and of early Islam are also of interest. Of more philosophic type are Tarikh-ul-tarikh and Rasail-i-Shibli, dealing with the science of history and with educational institutions in the palmy days of Islam respectively. Philosophy, mental and moral, has very little to show. Asar-ul-Akhlaq by Mirza Sultan Ahmad deals with moral philosophy and Vedanta Arya Bhashya with Vedantic Philosophy, while Lala Suraj Narayan, Mehr explains Yog, Sankhya and the Vedantic systems in "Chihl Darwesh." The Rig Veda Mantras with Hindi translations and commentary are being published in the "Arsh Granthawali" series by Pandit Raja Ram of Lahore, and a similar series is being issued by Rai Bahadur Shiv Nath from Multan.

The production of good vernacular literature owes much to the enterprize of the Punjab Religious Book Society, the Vakil Trading Company and the Khalsa Tract Society.

The Press.

693. The total number of English, Anglo-Vernacular and Vernacular newspapers published during 1911 was 248, including 13 Hindi, 22 Gurmukhi, 171 Urdu and 39 English publications, an increase on the previous year's return of one paper only. But the average periodical circulation (obtained by combining the averages of all papers) was 287,641 in 1911 as compared with 202,905 in the previous year. This considerable rise in circulation appears to have been due to the yearly widening circle of readers consequent upon the advance of education, a marked increase in the circulation of certain Muslim journals owing to the interest taken in affairs in the Near East and Persia, and the impetus to the sale of periodicals that was afforded by the Coronation Durbar. The principal places of publication were Lahore (152), Amritsar (55) and Delhi (25). **Newspapers.**

694. The principal Indian-owned papers published in English were the *Tribune* (1,830), *Panjabee* (2,194), *Observer* (1,120), and the *Khalsa Advocate* (846). The principal Vernacular papers were the *Hindustan* (14,585), *Arya Musafir* (6,500), *Parkash* (3,700), *Akhbar-i-'Am* (2,000), *Paisa Akhbar* (9,150), *Zamindar* (5,992), *Watan* (5,833), *Vakil* (3,100) and *Fauji Akhbar* (6,000). **Circulation.**

695. The total number of declarations under Sections 4 and 5, Act XXV of 1867, reported during 1911 was 120, but the actual number is probably slightly higher. Security was waived in many cases, but when taken the average amount demanded from publishers was Rs. 600 and from keepers of presses Rs. 700. No press prosecution took place in 1911, but in certain cases it was found necessary to demand security from, and more frequently to issue warnings to, newspapers, principally on account of articles calculated to foment sectarian animosities. The bitterness of the religious controversy, carried on in the less responsible vernacular papers, necessitated the issue of a general warning by Government that the law would be put in force, a warning which all sections of the press recognised as imperatively demanded. **Executive action.**

696. The course of events in Morocco, in Tripoli and in Persia engaged attention, especially from Muhammadan papers, which viewed with alarm the disasters that appeared to be overwhelming Islam. Foreign politics generally otherwise attracted little notice. **Foreign politics.**

697. The treatment of Indians in British colonies was a constant subject of comment; Hindu and Muhammadan papers joining in their protests against the indignities to which their fellow countrymen were alleged to have been subjected, especially in Natal and Mauritius. No such unanimity marked the discussion of the recurring raids of Muhammadan tribes into the Punjab and the never-ending kine-killing agitation, both of which gave rise to violent re- **Domestic.**

criminations, though certain papers, to their honour, rose above sectarian jealousies and advised to the common good, notably the "Tribune" and "Observer."

Legislation.

698. Legislation occupied a considerable amount of attention, and, though the Factory Bill did not arouse much interest, well informed and in general impartial criticism was bestowed on Mr. Gokhale's Primary Education Bill, Mr. Basu's Civil Marriage Bill, the Punjab Municipal Bill, the Punjab Panchayats Bill, and the Punjab Village Criminal Justice Bill. The Alienation of Land Act once more became the subject of sectarian controversy, which also was aroused at the census over the return of depressed classes as Hindus and over the Hindi and Urdu language question.

Political organizations.

699. The former uncompromising hostility of a certain section of the Punjab Hindu Press to the National Congress is now a thing of the past, and general approval of the proceedings was expressed. Not so, however, with the proceedings of the annual conference of the Punjab Hindu Sabha, which was generally attacked by the Hindu and Sikh Press as unpractical, with the exception of the *Panjabee* which supported its policy of gradual evolution. The Hindu Press stigmatized the All-India Muslim League as anti-Hindu, but the Muhammadan Press does not appear to have descended into the arena in reply.

Educational.

700. In educational matters the scheme for the Muhammadan University, welcomed by the Muslim papers, was not opposed by the Hindu Press as it was countered by the Hindu University scheme. Far more discussion was caused by Lala Lajpat Rai's elementary education league, which was distrusted by Muhammadans and Sikhs alike as an attack on the Urdu and Punjabi languages.

Durbar.

701. The Royal Visit evoked a chorus of loyal enthusiasm and, if the Press in any way reflected public opinion, the great Durbar stirred Indian imagination to its depths. The Durbar announcements were received by the Hindu Press with acclamation, though the Muhammadan papers viewed with distrust the modification of the partition of Bengal.

Miscellaneous.

702. Among miscellaneous matters, all joined in expressing satisfaction at the visit of the Viceroy to Lahore in April 1911, in blessing the Punjab Industrial Conference, in attacking the drink evil, and in advocating a High Court for the Punjab.

56.—LITERARY SOCIETIES.

Paucity of societies.

703. Literary societies, as the term is understood in the West, can hardly be said to exist in the Punjab. Machinery for the incorporation of such societies is provided by Act XXI of 1860, but most of the bodies which seek registration under the Act are not of a literary character. Numerous societies, both registered and unregistered, indeed have come into being, especially of recent years, the majority of which, however, are primarily religious and are meant for the advancement of the interests of particular communities which they profess to represent. Among such may be mentioned the various branches of the Arya Samaj and the Sanatan Dharm Sabha among Hindus, the Khalsa Diwan among Sikhs, and the many Muhammadan Anjumans. A few bodies are, however, established on a broader basis, and as they include individuals of all classes and denominations, their usefulness is not cramped by any sectarian limitations. Debating societies of course are a feature of college life.

Text-Book Committee.

704. Mention has already been made of the Text-Book Committee. It consists of 21 members each nominated for 2 years, with the Director of Public Instruction as President, and is representative of both public and educational interests. At present the committee consists of six Europeans, six Hindus, six Muhammadans and three Sikhs; a branch has been in existence at Delhi since 1902, and valuable assistance is rendered by the Delhi scholars, who are particularly well qualified to deal with literary productions in Urdu. The Memorandum of Association enumerates the objects of the committee as follows:—(*a*) the recommendation of suitable text-books in all subjects for schools and colleges; (*b*) the preparation, translation and publication of text-books; (*c*) the maintenance of lists of books for the libraries of schools

and colleges; (*d*) the encouragement of the development of vernacular literature; and (*e*) the maintenance of a library and museum of reference. Thus the original plan of the committee contemplated advisory functions with regard to books for both schools and colleges, but within recent years it has confined its attention to the consideration of school-books, leaving college text-books to be dealt with by the University.

Punjab Public Library.

705. The Punjab Public Library was established in 1886 with the object of providing a public library for the use of all classes of the community and a reading room open to the public free of charge. The library contributes to the intellectual advancement of the country by placing within the reach of students and scholars literary and scientific works which it would be impossible for them to acquire for themselves. The committee of management consists of 22 members; the Director of Public Instruction, the Director of Agriculture and Industries, and the Deputy Commissioner, Lahore, are *ex-officio* members. Members are nominated by the Punjab University, the Lahore Municipal Committee, the Lahore Gymkhana, and the Bishop of Lahore, and two are elected by the life members from among their number. The remaining members are nominated by the Punjab Government, which also appoints the President, at present Sir P. C. Chatterji, Kt., C.I.E. There are on the rolls 172 life members and life subscribers and 295 annual subscribers. In addition to receipts from these, the library receives a grant from Government and from local bodies. A large number of books, both on general and technical subjects, have been collected, and in 1909 a well-equipped commercial and technical section was added.

Punjab Historical Society.

706. The Punjab Historical Society was established in 1910, mainly through the efforts of Mr. J. P. Thompson, I.C.S., to promote the study of the history of the province. The membership now exceeds 150. Papers are read as opportunity offers, and are subsequently published in the society's journal. The large field of inquiry which lies before the society is such as to interest all sections of the community.

Society for Promoting Scientific Knowledge.

707. Although not strictly speaking a literary society, the Society for Promoting Scientific Knowledge calls for notice. Established in 1900, the society now has branches at Multán, Amritsar, Delhi, Kapúrthala and Srínagar (Kashmír), and numbers some 250 members. This non-sectarian and non-political body is now registered under Act XXI of 1860, and has for its object the diffusion of useful and scientific knowledge. In particular special attention is devoted to spreading knowledge of the elementary principles of sanitation and preventive medicine by means of lectures, lantern demonstrations and the distribution of tracts on such subjects as Tuberculosis, Malaria, Cholera and Plague. More recently classes in Hygiene and First Aid to the Injured have been started. A monthly magazine in Urdu, the "Raushni," is published. An annual grant of Rs. 200 is received from the Local Government and contributions from Municipalities and District Boards.

57.—Arts and Sciences.

School of Art.

708. The Mayo School of Art has already been mentioned in a previous section as one of the educational institutions of the province. The industrial training afforded by the school, however, is by no means the only object of the institution, and a large part of the time of the staff and pupils is devoted to outside work. The work done in connection with the Delhi Durbar has already been referred to. Among other work undertaken, the designing of the buildings of the Khalsa College at Amritsar and of Queen Mary's College at Lahore was carried out by the School of Art. Specimens of work done were sent to the Franco-British Exhibition of 1908 and to the Allahabad and Lahore Exhibitions.

Lahore Central Museum.

Attendance.

709. The total number of visitors during the year was 382,828 and the daily average was 1,091, evidence of an ever-increasing growth in the popularity of the Museum. Not the least satisfactory feature of the year has been the

tendency of local colleges to send parties of students under teachers to study the different collections. The twelve "purdah" days show an attendance this year of 3,526, figures again which plainly indicate that the privilege of a reserved day is being more and more appreciated.

Additions.

710. Among the noteworthy additions made to the Museum are some brass statuettes of Buddha, of Bodhisattvas, and Hindu deities, some copper, brass and wooden statuettes of Lamaistic subjects, a temple banner, and a bas-relief. The latter, a most interesting specimen, relates to the birth of Buddha's horse, Kanthika, and groom, Chanda, born at the same time with Buddha himself. The collection of pictures has been enriched by the acquisition of 188 old pictures and drawings of the Kangra School and a few other pictures. An interesting addition to the Tibetan collection has been a beautiful carved wooden panel brought in the expedition of 1904 from a monastery in Lhasa.

One very notable presentation was made. His Imperial Majesty the King Emperor having been graciously pleased to present to the Museum one of the tigers that fell to his gun in Nepal.

The services of Mr. Hargreaves of the Archæological Department have been lent for the purpose of cataloguing the Buddhist sculptures. Mr. Hargreaves' catalogue will be most interesting to scholars, and supply a long-felt want.

With the addition of Mr. Bleazby's collection of Græco-Bactrian coins, obtained at a cost of Rs. 12,000, half of which was paid by the Punjab Government and half by the Director-General of Archæology in India, the Lahore Museum can now boast the second-best collection of Indo-Greek coins in the world. Of this collection, and of the Mughal Cabinet, Mr. Whitehead is now engaged in making catalogues. The catalogues will amalgamate the Government, the Rodgers, the Supplementary, and the Bleazby collections, and will be very valuable contributions to numismatic literature.

Eight finds of coins were reported under the Treasure Trove Act, aggregating 49 gold and 1,500 silver coins, of which 3 gold and 276 silver coins were purchased, a find of 893 Mughal rupees in Gujranwala district included several new and unpublished coins.

Rearrangement of collection.

711. The policy of gradually overhauling all the collections, improving the arrangement, making list of the objects in each case and labelling each separate exhibit is being continued. Particular attention has been paid during the past year to the collections of inscriptions, of textile fabrics, of art ware and of photographs. The collection of snakes, which has a special interest for the zamindar public, has been rearranged by Dr. Caleb while Dr. Pilgrim of the Geological Survey has rearranged the fossils making them more interesting to the lay mind and more accessible to the student.

Finance.

712. The expenditure amounted to Rs. 15,361-8-9, the whole of which was defrayed by Government with the exception of Rs. 180 contributed by the Lahore Municipality and Rs. 132-8-6 from the sale of coin catalogues, guide-books and surplus coins. A special grant of Rs. 6,000 was made by the Punjab Government for the purchase of the collection of Græco-Bactrian coins. It has now become necessary to consider the question of the expansion of the building, as the galleries are already over-crowded with exhibits.

Lantern lectures.

713. Fifteen lectures in the Museum Hall were arranged by the Curator and eight by the society for promoting scientific knowledge. The attendance was often disappointingly small and it is clear that there is not at present a public in Lahore prepared to pay even a fee of one anna for lectures of this type. The Government grant of Rs. 1,500 was expended largely on new slides. A special feature of the year's work has been the increase in slides lent out. There is no doubt that the privilege of borrowing slides is becoming increasingly appreciated.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1912, also in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1911-12.

58.—Archæology.

Hindu and Buddhist Monuments.

Notifications.

714. The site of Taxila, Rawalpindi district, and the Siva temples at Dasál and Nagar in the Kulu sub-division of the Kángra district were placed by Government notification under the protection of the Ancient Monuments Preservation Act (VII of 1904). Rupees 1,653-9-3 were spent on conservation in 1911-12.

Publications.

715. During the year Dr. Vogel published Part I of his "Antiquities of Chamba State" (Volume XXXVI of the new Imperial series of the Archæological Survey of India) and "Tile Mosaics of the Lahore Fort" (Volume XIV of the Journal of Indian Art and Industry). A description of the temple of Mahadeva at Bajaura in Kulu by Dr. Vogel appeared in the Annual Report of Archæology for 1909-10.

The preparation of the list of ancient monuments of the Punjab is being continued and will take many more years to complete. During the year the temples of the Bharmaur and Churáh Wazarats of Chamba were visited for the purpose. Lists of British Láhul and Spiti have been prepared by Dr. Francke of the Moravian Mission. The list of Kángra Monuments is now practically ready for publication.

Muhammadan and British Monuments.

Notifications.

716. Seventeen buildings were placed under the protection of Act VII of 1904. Ten of these are at Hissar, Hansi and Fatahabad in Hissar district. At Shahdara, outside Lahore, Jahangir's Mausoleum, the sarai adjoining, and the tomb of Asaf Khan and Nurjahan have been notified. Other notifications declare as "protected monuments" the Sawi mosque at Multán, Sheikh Tayyib's mosque at Kaithal in Karnál and Ali Mardan Khan's tomb at Lahore. Nineteen other monuments at Delhi and Lahore are being recommended for protection.

Excavation.

717. Much interesting work has been carried out at the Kutab (Delhi). The whole of Ala-ud-din's north extension has been exposed and Altamsh's screen, immediately to the north of the mosque, has been cleared of earth and rubbish and a series of column bases were found underneath at this point: a lower plinth was also found on the temple wall some five feet down below the ground level. At the Purána Killa, Delhi, a start has been made to open up the Talaki Gate and a fine ashlar gateway has been disclosed. In the Delhi Fort an underground passage was discovered between the Rang and Mumtaz Mahals and will be examined.

Conservation.

718. The improvement scheme proposed for the Delhi Fort in 1902 by the Director-General of Archæology has now been carried out, in its main essentials, in accordance with his original proposals. Rupees 81,240 were spent on this work during the year. Much activity was shown at Delhi in view of the Royal visit and special grants were made both by the Durbar Committee and by the Imperial and Provincial Governments. At the Kutab all the land has been acquired to the furthest limits of Ala-ud-din's northern extension. Repairs of the old masonry will be put in hand as soon as the neces-

sary examination can be made. At Lahore useful work has been done during the year on the Shish Mahal in the Fort, on the garden and tomb of Nurjahan and on Jahangir's tomb at Shahdara. The restoration of the Badshahi Mosque has been taken in hand, to which work the Mosque Committee is contributing, and a scheme for relaying the Hazuri Bagh containing Ranjit Singh's Bára-dari has been prepared. Much, however, remains to be done at the Lahore Fort. At Multan the tomb of Rukn-i-Alam has been carefully examined and the fears entertained as to the safety of the structure prove to be largely exaggerated. Improvements have also been introduced at the Shahi mosque, Chiniot, in Jhang district. Altogether Rs. 1,32,918-10-1 have been spent during the year on conservation in the Punjab.

Publications.

719. Little or no progress was made with the systematic listing of monuments which, as in the case of the Hindu and Buddhist monuments, will take years to carry out. Articles on the Shah Burj at Delhi Fort and on the Diwan-i-Am, Lahore Fort, were contributed to the Annual Report of Achæology for 1909-10.

Inscriptions on Christian tombs.

720. Separate mention must be made of the "List of inscriptions on Christian tombs or monuments in the Punjab, North-West Frontier Province, Kashmir and Afghanistan, possessing historical or archæological interest,"* published as Part I of volume II of the series of "Indian Monumental Inscriptions." The volume contains lists only, as the biographical notes have perforce been relegated to a second part : and in point of antiquity the Punjab has nothing to show that can compare with the Dutch and Portuguese inscriptions of the 16th and 17th centuries which are found in Madras and Bengal. The melancholy interest of the subject forms the theme of an admirable historical introduction in which the mingled pathos and glory of the events kept alive by the monuments have been treated with unerring sympathy.

GENERAL.

Museums.

721. An account of the Lahore Central Museum is given in the preceding section.

The Delhi Museum of Archæology has been transferred from the Nakarkhana to the Mumtaz Mahal in the Fort, which was given up by the Military authorities for the purpose, and converted to the use of a museum.

A valuable collection of loan exhibits was brought together in the Museum in connection with the Imperial Durbar : the articles selected for exhibition having some connection with the history of Delhi, its rulers or its famous men. A scholarly catalogue of the exhibits was compiled by Mr. J. P. Thompson, I.C.S., the information given in which is of permanent value.

*By Miles Irving, I.C.S., 1910, printed at the Punjab Government Press.

CHAPTER IX.
MISCELLANEOUS.

59.—ECCLESIASTICAL JURISDICTION.

Church of England.

See of Lahore.

722. The Punjab which was originally included in the See of Calcutta, was, by Royal Letters Patent, constituted a separate diocese in December 1877, and the Right Reverend T. V. French, D.D., was appointed its first Bishop, with the style and title of Bishop of Lahore. At the end of 1887 Bishop French resigned the See, and on the 6th of January 1888 the Venerable Henry James Matthew, D.D., Archdeacon of Lahore, was consecrated in Westminster Abbey Bishop of Lahore. Bishop Matthew died in December 1898, and the Reverend George Alfred Lefroy, D.D., formerly head of the Cambridge Mission, Delhi, was consecrated Bishop by the Bishop of Calcutta and four other Bishops in the Cathedral at Lahore on the 1st of November 1899. The See of Lahore as constituted by Letters Patent includes the Punjab, the North-West Frontier Province, and the Province of Sind, which was formerly a part of the Bombay Diocese. The Bishop also exercises Ecclesiastical jurisdiction in Kashmír and in the Persian Gulf. With the extension of British Military occupation on the South-West Frontier the Ecclesiastical jurisdiction of the Bishop has also extended to Quetta and other places in Southern Balúchistán occupied by British troops. Like all other Indian Sees, the Lahore See is subject to the authority of the Bishop of Calcutta as Metropolitan. By authorization of the Letters Patent two Archdeacons are appointed by the Bishop; one, with the title Archdeacon of Lahore, from among the Senior Chaplains, who exercises Archidiaconal jurisdiction within the limits defined above; the other, with the title Archdeacon of Delhi, appointed specially to supervise and stimulate the work among the Indian congregations of the diocese.

Chaplains.

723. Chaplains on the Bengal (Lahore) Ecclesiastical Establishment are posted at the following stations in the Punjab:—

Delhi.	Ferozepore.
Ambála.	Siálkot.
Simla.	Ráwalpindi.
Jullundar.	Ráwalpindi, West Ridge.
Amritsar.	Campbellpur.
Dalhousie.	Murree.
Lahore.	Multán.
Lahore Cantonments.	

Chaplains are also posted to Kasauli, Subáthu and Dagsháí; but, owing to the large number of hill stations in the Punjab, the Chaplains for these stations are selected as follows:—

For Kasauli and Subáthu, from the Chaplains of the diocese of Calcutta; and for Dagsháí, from the Chaplains of the diocese of Rangoon.

A Chaplain from the diocese of Lahore is every third year deputed to Kashmír, from the 1st of May to the 30th of September, the Bishop of Calcutta and the Bishop of Lucknow nominating for the two intervening seasons. Two Chaplains are usually placed in charge of the Military Camps lying between Dungagali and Murree for the same period.

Besides these Chaplains on the regular establishment, the Additional Clergy Society maintains Clergymen at Lahore (Railway District), and at Jhelum, in the Punjab. The ministrations of the Chaplain at Lahore are exclusively on behalf of Railway employés. These Clergymen receive allowances from Government (as grants-in-aid) and from other funds raised by the Additional Clergy Society.

Lahore Cathedral.

724. The interior of the Lahore Cathedral was completed in 1892. The two western towers were left unfinished, but these have just been taken in hand and will shortly be completed at a cost of about Rs. 60,000. A further proposal to extend the nave westwards by the addition of two bays, at an estimated cost of about another Rs. 70,000, has been accepted by the Diocesan Conference and the Cathedral Vestry, but for this addition funds have not yet been raised.

Church of England Institutions.

725. The following are the principal Educational Institutions in the Punjab which are Diocesan, or in which the religious teaching is that of the Church of England :—

(1) Lahore Divinity College, Church Missionary Society.

(2) The Lawrence Asylum, Sanáwar (Simla Hills).

(3) The Lawrence Asylum, Murree.

(4) Bishop Cotton's School, Simla.

(5) Auckland House School, Simla.

(6) The Mayo Orphanage and School for girls, Simla.

(7) Christ Church Schools at Simla.

(8) St. Denys' School for girls at Murree.

(9) The Cathedral Orphanages at Lahore.

(10) Cathedral High Schools for boys and for girls at Lahore.

(11) Indian Christian Boys' Schools :—Baring High School, Batála (Gurdáspur), Vernacular Middle School, Clarkabad (Lahore).

(12) Indian Christian Girls' Schools :—Alexandra High School, Amritsar, Middle School, Amritsar, Primary Schools at Clarkabad, Narowál (Siálkot) and Ajnála (Amritsar).

(13) Boys' Mission Schools at Multán, Baháwalpur, Amritsar, Majítha (Amritsar), Batála, Fatehgarh (Gurdáspur), Nárowál, and Kotgarh (Simla).

(14) Girls' Mission Schools at Amritsar, Jandiála (Amritsar) and other places.

Church of Scotland.

Church of Scotland.

726. The Punjab forms part of one of the six Presbyteries, by which the Church of Scotland is represented in India, the whole Presbytery comprising the Punjab, the North-West Frontier Province, Jammu and Chamba. Each Presbytery consists of all the ministers of the Church of Scotland who hold appointments of the Church within its bounds and one elder sent by each Kirk-Session within the same bounds. The Presbytery meets at various centres to transact business connected with the Church.

Chaplains or acting Chaplains are stationed permanently at Ambála, Dalhousie (Summer only), Kasauli, Lahore, Murree and the Galis (Summer only), Ráwalpindi, Siálkot and Simla. There are Scottish soldiers at Delhi, Amritsar, Ferozepore, Jullundar and Multán and at Sabathu, Solan, Dagsháí and Jutogh in the Simla Hills who are regularly visited from other stations.

Scottish regiments are usually accompanied by their own Chaplain, who acts as the Chaplain of the station, while the regiment remains, the other Chaplain, if the station is one of those mentioned above, being for the time sent elsewhere. At the present time there is no Scottish regiment within the bounds of the Presbytery of the Punjab and North-West Frontier Province.

The Chaplaincy work of the Punjab is under the direction of the Presidency Senior Chaplain of Bengal, Calcutta.

Wesleyan Church.

Wesleyan Church.

727. The Wesleyan Methodist Church in the Punjab is administered by the General Superintendent, Bombay and Punjab District, Revd. A. J. Revnell, at Ráwalpindi. Churches have been built at Ráwalpindi, West Ridge, Siálkot, Lahore, Ferozepore and Ambála, at which places there are resident Chaplains. There is also an acting Chaplain at Dalhousie during the hot weather, and Wesleyan troops in other stations are regularly visited and ministered to. The Church has no missionary society in the Punjab, its work being confined to British troops and civilians; but the Wesleyan Chaplains also minister to the Baptists and Congregationalists, as there are no Chaplains of these denominations in the province.

Roman Catholic Church.

Jurisdiction.

728. Portions of the province are included in the Roman Catholic Metropolitan See of Simla, the Archdiocese of Agra, the Diocese of Lahore and the Prefecture Apostolic of Kashmír and Káfiristán. The Roman Catholic Chaplains are not paid by the State, but grants-in-aid are given to the Church in cantonments according to the numbers of the troops attending.

Archdiocese of Agra.

729. The Vicariate Apostolic of Hindustan, with its Episcopal See at Agra, was constituted an Archdiocese by the Holy See on September 1st, 1886. Originally embracing the whole Punjab, the Diocese now includes the Punjab district of Delhi only, with a Chaplain at Delhi.

Diocese of Lahore.

730. In 1880 the portion of the Punjab extending northwards from the River Sutlej (inclusive of Ferozepore) was formed into a Vicariate separate from that of Hindustan, and the Right Reverend Dr. P. Tosi was appointed Bishop and Vicar-Apostolic of the Punjab. In 1886 the Vicariate was constituted a Diocese under the title of the Diocese of Lahore. The Diocese of Lahore on the north extends up to the districts of Bannu, Kohát, Jhelum and Attock, and the State of Kashmír, and includes the Native State of Chamba. On the west it extends to the confines of Afghánistán and Balúchistán, comprising the Punjab districts of Muzaffargarh, Dera Gházi Khan and Miánwáli and the Native State of Baháwalpur. It has for its southern limits Rájpútána and the Diocese of Simla, and extends as far as the boundaries of the Patiála State and the Ambála district. On the east it comprises the district of Kángra, exclusive of the Kulu sub-division. The first Bishop of the Diocese of Lahore was Dr. Symphorien Mouard, consecrated in 1886. On his death in 1890 Dr. Vanden Bosch became Bishop in 1891 and was transferred to Agra in 1892. Dr. Godfrey Pelckmans was consecrated on the 13th August 1893 at Simla by Dr. Vanden Bosch. Dr. Pelckmans died in 1904, and was succeeded by the present Bishop, Dr. Fabian Eestermans, who was consecrated at Antwerp in 1905. Chaplains are posted at Lahore, Lahore Cantonments, Amritsar, Jullundar, Ferozepore, Siálkot, Multán and Dalhousie. Besides these Chaplains there are two or more resident Missionaries with Churches, Schools and Dispensaries for the poor at Adah and Sáhowála (Siálkot), Lahore Cantonments, Maryabad (Gujránwála), and Francisabad and Khushpur (Lyallpur).

Prefecture Apostolic of Kashmir and Kafiristan.

731. The Prefecture Apostolic of Kashmír and Káfiristán was erected as a separate Ecclesiastical charge by the Holy See on the 6th of July 1887. It comprises the Punjab districts of Ráwalpindi, Jhelum and Attock. The Prefect Apostolic appoints Military Chaplains to Ráwalpindi, West Ridge, Murree and the Murree Gallies. Besides these Chaplains, the Prefecture maintains additional Chaplains, who receive no grant or allowances from Government,—one at Ráwalpindi for Railway employés, and, during the summer season, one for the Military Camps near Murree.

Archdiocese of Simla.

732. On September 13th, 1910, the Archdiocese and Metropolitan See of Simla was erected by the Holy See. It was formed by separating certain districts from the Archdiocese of Agra and from the Diocese of Lahore respectively. From Agra the new Archdiocese received the districts of Simla, Ambála, Hissar and Karnál; and the States of Loháru, Máler Kotla, Jínd, Nábha

and Patiála; from Lahore the sub-division of Kulu, with Láhul and Spiti, and the States of Mandi and Suket. The first Archbishop and Metropolitan is the Most Revd. E. A. J. Kenealy, D.D., who was consecrated in Rome on January 1st, 1911, by Cardinal Gotti, assisted by the Archbishop of Westminster and Archbishop Jacquet. The Suffragans of the Metropolitan See of Simla have not yet been appointed.

The Archbishop of Simla appoints Chaplains to Ambála (2 Chaplains) and Simla, also to Dagsháí, Jutogh, Kasauli, Solon, and Subáthu in the Simla Hills.

Roman Catholic Institutions.

733. The Educational Institutions of the Roman Catholic Church in the Punjab are :—

Simla Archdiocese—

(1) St. Aloysius' Boarding School, Simla, for young ladies.

(2) St. Francis' Military Orphanage, Simla, for European girls.

(3) St. Joseph's Day School, Simla, for girls.

(4) St. Michael's Day School, Simla, for boys.

(5) Loretto Convent at Tara Hall, Simla—Boarding School for young ladies, conducted by the Nuns of the Institute of the Blessed Virgin Mary.

(6) Convent Day School, Ambála, for European children.

Agra Arch Diocese—

None in the Punjab.

Lahore Diocese—

(1) St. Anthony's High School for European boys at Lahore.

(2) St. Francis' Orphanage for native boys at Lahore.

(3) The Convent School of the Congregation of Jesus and Mary, for European girls at Lahore.

(4) St. Joseph's Orphanage for native girls at Lahore.

(5) A Primary and Middle School at Dalwal, Jhelum District.

(6) St. Mary's Convent School for boys and girls at Multán.

(7) The Convent School at Siálkot.

(8) The Convent of the Sacred Heart at Dalhousie, for boys and girls.

(9) Three Convents of Nuns of the Order of Jesus and Mary at Siálkot, Lahore and Murree.

Besides these there are elementary schools for native children of both sexes at Khushpur, Adah, Sáhowála, Maryabad and Jámki (Sialkot), containing in all more than 500 scholars.

Prefecture Apostolic of Kashmír and Káfiristán—

(1) The Convent of Jesus and Mary, Murree, with a High Class Boarding School for young ladies and a 2nd Class Boarding School and Orphanage for girls.

(2) St. Thomas' College and Orphanage for Boys, Murree.

(3) The Presentation Convent, with a Day School, Ráwalpindi.

(4) St. Joseph's Orphanage for Native boys and girls, and Agricultural School at Yusufpur (Ráwalpindi).

Missions.

Church Missionary Society.

734. The Church Missionary Society began work in the Diocese of Lahore in 1851 on the arrival of the late Rev. Robert Clark, M.A., who completed almost 50 years of work in the country. Geographically its Missions may be divided into three sections,—(*a*) those of the Central Punjab, with main stations at Lahore, Amritsar, Tarn Táran, Batála, Nárowál, Ajnála, Asrapur (Amritsar), Clarkabad, Gojra, Toba Tek Singh and Multán: (*b*) the long Frontier line comprising Simla and Kotgarh; Islámabad and Srínagar; Pesháwar, Bannu, Tánk, Dera Ismail Khan and Sakhi Sarwar; Quetta and the Kelát country: (*c*) the Sind stations of Shikárpur, Sukkur, Hyderabad and Karáchi.

The European Missionaries, including those on furlough, consist of 31 Clergymen, 15 men and 5 women Doctors, 10 Nurses, and 21 other lay missionaries (8 men, 13 women); and there are besides 18 Indian Clergymen and 13 Indian Doctors, as well as a considerable staff of Catechists, School Teachers and Hospital workers. The work is mainly of three kinds, *viz.*, (1) in connection with the Mass Movement towards Christianity in the villages of the Central Punjab, notably around Batála, Nárowál and Clarkabad, and in the Chenab Colony; (2) Medical, including seven main hospitals for men and women combined, and three for women only: these are all on the frontier line of Missions, except those at Amritsar and Multán; (3) Educational, including the Divinity School at Lahore, a first grade College at Pesháwar, 10 High Schools, 6 Middle Schools and one Industrial School, besides Village Schools.

Church of England Zenana Missionary Society.

735. The Church of England Zenana Missionary Society has stations in the Punjab at Amritsar, Tarn Táran, Jandiála, Batála, Nárowál, Ajnála, and Asrapur (Amritsar). In every one of these it has a women's hospital or dispensary, and in most of them girls' schools also, while women are visited and taught in their homes both in cities and villages. The chief educational centre is Amritsar, where there are over 500 pupils. At Amritsar the whole midwifery work of the city is committed to the Zenana Mission Hospital, and over 2,600 cases were attended in 1911. The total European staff consists of 22 medical and 26 non-medical workers. Eight of the former are fully qualified doctors.

Society for the Propagation of the Gospel Mission.

736. The Society for the Propagation of the Gospel has a Mission in the South of the Punjab, with its head-quarters at Delhi, and branches in Karnál, Gurgaon, Rewári (Gurgaon) and Mahrauli (Delhi). It was founded in 1852, and has an extensive organization in various departments of Mission work, both Medical, Educational and Evangelistic. It has three well-equipped Zenana Hospitals, in Delhi, Karnál and Rewári, respectively. It has a staff of 25 European lady workers, of whom 10 are medical and the rest have charge of Schools or are engaged in Zenana work in Delhi and the out-stations of the Mission.

Cambridge Mission.

737. Allied with the S. P. G. Mission is the Cambridge Mission, which has undertaken the chief part of the male work of the district. It has eight ordained and 4 other lay European Missionaries. It has a College affiliated to the Punjab University, and teaching up to the M.A. degree examinations. It numbers 170 students, over 90 of whom live in hostels connected with the College. The Mission has also charge of a large Mission School with 850 boys. Grants-in-aid from Government are received for all the Medical and Educational institutions of the Mission. The Cambridge Mission has also a branch at Rohtak for work among the Jats and other villagers of the district.

Canadian Church Mission.

738. The Board of Missions of the Canadian Church has recently begun work in the Diocese, and on 1st January 1912 took over the Kángra Mission district from the Church Missionary Society as its first sphere of operations. At present the staff consists of a Clergyman, whose wife is a fully qualified Doctor, and three other ladies.

Church of Scotland Mission.

739. The Church of Scotland Punjab Mission was founded in 1857 and carries on work at Siálkot, Jammu, Gujrát, Wazírabad, Daska, Chamba and Jalálpur. The work is evangelical, educational and medical. There are 11 Missionaries, 9,283 baptised Christians, 3,655 pupils under Christian instruction

and three ordained native pastors. Mission work is also carried on by the Church of Scotland Women's Association for Foreign Missions at Gujrát, Siálkot, Chamba and Daska. There are 18 lady missionaries, 28 native teachers and number of native assistants.

American Presbyterian Mission.

740. The American Presbyterian Church began operations in the Punjab in 1834, its first station being Ludhiána. In 1849 Messrs. Newton and Forman began work in Lahore. The following stations and districts in the Punjab are occupied by the Mission :—Ludhiána, Khanna and Jagraon (Ludhiána district), Lahore and Kasur, Ferozepore, Jullundur, Hoshiárpur, Subáthu (Simla Hills) and Ambála. Santokh Májra is in charge of an itinerant Missionary. There are in connection with the Mission 26 ordained foreign Missionaries and 7 Medical Missionaries, of whom 6 are ladies. There are, in addition to the above, 18 lady Missionaries, and 34 ordained Native Ministers are connected with the Mission. The Mission's Forman Christian College at Lahore teaches up to the M.A. Standard of the Punjab University, and has 500 students in attendance. This institution receives a grant from Government. It has also important educational work in the Boys' Boarding School at Ludhiána and the Girls' School at Hoshiárpur for the benefit of the Indian Christian community. In addition to these there are High Schools for the general public at Lahore, Jullundar, Ludhiána and Ambála.

American United Presbyterian Mission.

741. The Siálkot Mission of the United Presbyterian Church of North America was established at Siálkot in 1855 by the Reverend Andrew Gordon. It consists at present of 24 ordained men, most of whom are married, with their wives, one layman and wife, one male physician and wife, three female physicians and 40 unmarried ladies. The stations are at Gujránwála, Khángáh Dográn and Sángla (Gujránwála), Gurdáspur and Pathánkot (Gurdáspur) Siálkot, Pasrúr and Zafarwal (Siálkot), Sargodha (Shahpur), Jhelum and Ráwalpindi.

Educational work is carried on in 204 schools of which two,—one for boys at Gujránwála and one for girls at Pasrúr,—are Industrial; 190 are primary, mostly indigenous, 181 for boys to which girls too are admitted and 9 for girls; 8 middle, 5 for boys and 3 for girls; and 4 high, 3 for boys and 1 for girls. In addition to these are the Gordon Mission College at Ráwalpindi, affiliated to the Punjab University for the B A. and B.Sc. classes, and the Theological Seminary at Gujránwála which aims at the training of religious leaders.

There is a general hospital at Sargodha and female hospitals at Jhelum, Pasrúr and Siálkot. In connection with each of these is a dispensary, and there are also dispensaries at Bhera and Malakwál (Shahpur) and at Kala (Jhelum).

Methodist Episcopal Mission.

742. In March 1881 the Methodist Episcopal Mission of the United States of America was established at Lahore and a church, built out of voluntary contributions and a subsidy from the American Mission Board, was dedicated on May 29th, 1884. In 1891 a station was established at Delhi and missionaries are resident in Lahore and Delhi only. Work in English has for the most part been taken over by Wesleyan Chaplains. In 1902 the Mission commenced a forward movement along vernacular lines and at present 130 male and 110 female Indian workers carry on the work in Lahore, Gurdáspur, Multán, Muzaffargarh, Ferozepore, Ambála, Karnál, Delhi, Hissar and in several Native States. The Mission supports a boarding school for boys and one for girls in Lahore. The Reverend Bishop F. W. Warne, D.D., resident at Lucknow, is the Bishop in charge of the field.

Baptist Mission.

743. The London Baptist Missionary Society opened its first station in the Punjab in 1818 in Delhi and now has additional stations at Simla, Kasauli and Kálka, Kharar (Ambála) and Palwal Gurgaon), with numerous sub-stations in the Ambála, Delhi and Gurgaon districts. The society has nine European Missionaries in the province and maintains 13 Indian churches. The educational establishments include the North India Training Institute (a Boarding School with Theological classes) at Delhi, and a High School at Kharar, besides 30 day schools, with an attendance of 1,047 boys and 28 girls. A hospital is maintained at Palwal and dispensaries in Delhi and at Hathin (Gurgaon).

744. The Baptist Zenana Mission is separate from the above and is managed throughout by ladies. There are stations at Delhi, Palwal (with a settlement at Salámatpur), Kharar and Bhiwáni (Hissar), with 21 English lady Missionaries. Boarding schools are maintained at Delhi and Kharar and five day schools, the number of scholars being 428. The society has hospitals at Palwal and Bhiwáni, three dispensaries in Delhi, and others at Bhiwáni and Hánsi (Hissar). Baptist Zenana Mission.

745. The Zenana Bible and Medical Mission has stations at Lahore and Kasúr in Lahore district and employs at these places ten Missionaries or Assistant Missionaries. There are schools in both stations—the Kinnaird High School at Lahore having an attendance of 162 girls. Zenana Bible and Medical Mission.

746. The Moravian Mission was opened in 1853 for work among Tibetan speaking populations beyond other Missionary enterprises. The stations in the Punjab are at Pu on the Upper Sutlej in Bashahr State and at Kailang in Lahul: the head-quarters of the Mission are at Leh. Moravian Mission.

747. The work of the Salvation Army is under the direction of Commissioner Booth Tucker, the head-quarters of the force for India and Ceylon being in Simla. Operations began in the Punjab about 10 years ago and the Army has now 318 officers working under its banner in this province. The aims of the Salvation Army, apart from proselytism, are chiefly directed to the reformation of criminals, the regeneration of criminal and other depressed tribes, and the improvement, partly as a means to these ends, of village industries, in particular hand-loom weaving and silk production. Centres have been formed in Lahore, Ludhiána, Chawa (Ludhiána), Kot Mokhal (Siálkot), Changa Manga (Lahore), Ani (Kulu) and Chini (Bashahr). It is the policy of the Salvation Army to make each of its enterprises pay its way, and in the prosecution of this policy a large measure of success has been obtained. Salvation Army.

60.—Ecclesiastical.

748. In the year 1911-12 the Government of India sanctioned the occupation by the civil authorities of a plot of land in the Dalhousie cantonment as a site for the proposed new military church in that cantonment. A grant-in-aid of Rs. 4,100 was sanctioned towards the construction of an Anglican Church at Lyallpur, and another of Rs. 56,112 for a church for the large Railway population in Lahore who had previously worshipped in a tomb which had been adapted as a church. The Local Government sanctioned a grant for special repairs to the cemetery at Adamwahan (Multán) which had been considerably damaged by the floods of 1906 and arranged for its future maintenance in decent order by Civil authorities of Multán. Grants.

61.—Stationery.

749. The Punjab administration depends on the Stationery Department, Calcutta, for its stationery requirements. The value of issues in 1911-12 to the officers in the Punjab aggregated Rs. 2,12,260, *viz.*, cost of printing paper Rs. 1,33,356 and of office stationery Rs. 78,904, against Rs. 1,25,391 and Rs. 1,21,914, respectively, in the previous year, aggregating Rs. 2,47,305. The decrease in office stationery is due to the introduction of the system of fixed annual allotments for offices and departments. Issues.

62.—Punjab Government Press.

750. The income of the Press during the year 1911-12 amounted to Rs. 28,897, exceeding that of the preceding year by Rs. 3,870. There has been a steady increase in the income of the Press during the past four years, as shown below :— Income and expenditure.

	Rs.
1908-09	19,326
1909-10	21,902
1910-11	25,027
1911-12	28,897

The total expenditure amounted to Rs. 2,00,318, or an increase of Rs. 5,672 over the figures of the preceding year, due chiefly to the entertainment of the establishment for book and job work transferred to the Government Press on the revision of the printing contract with the Civil and Military Gazette Press with effect from 1st April 1911.

Outturn.

751. The value of work turned out during the year was Rs. 1,57,677 as against Rs. 1,34,447 in the previous year, an increase of Rs. 23,230. The total number of pages set up in all founts of type during the year under report came to 63,571 as against 59,100 in the preceding year, exclusive of work done by Government contractors and paid for out of the Press grant. The cost per page was Re. 1-4-11 as against Re. 1-5-10 in the previous year, or a decrease of 11 pies per page. The reduction is satisfactory.

Contract work.

752. The cost of work done by the contractors for Government Printing for departments and offices during the years 1910-11 and 1911-12 was Rs. 54,492 and Rs. 49,247, respectively. An expenditure of Rs. 10,672 was also incurred during 1911-12 under an arrangement made with the Civil and Military Gazette Press for the storage and despatch of forms.

General.

753. The machines and hand-presses are in good working order. Two of the older machines are to be replaced. A Monotype machine to be worked by electricity has been indented for.

The Press account registers were checked by the Inspector of Press Accounts in the year under report and were found correct.

It has been decided to construct new buildings for the Press near the Civil Secretariat Office. The Punjab Veterinary College will be located on the present site.

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1912-1913.

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REPORT

ON THE

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PUNJAB AND ITS DEPENDENCIES

FOR

1912-13.

PART I.

GENERAL SUMMARY.

(The "year" throughout this report is not invariably the financial year ending 31st March 1913. At the heading of each chapter, with the exception of chapter I, a reference is given to the departmental reports which contain details of the subjects dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the "year" in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1913, in chapter II it is the revenue year ending 30th September 1912 and in chapters III and VI it is the calendar year ending 31st December 1912.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

Changes in the Administration.

Personnel.

1. There was no change in the Lieutenant-Governorship, Sir Louis Dane remaining the head of the province throughout the year. The scheme of District and Sessions Judges, noticed as proposed in last year's Administration Report, has been sanctioned since the close of the year and will be brought into effect in the spring of 1914. A separate Department of Fisheries was constituted in the autumn of 1912.

Territorial.

2. On the creation of the Delhi Province, the city of Delhi and its environs were excluded from the control of the Punjab Government, the Chief Court retaining jurisdiction. The remainder of the old Delhi District was absorbed into the neighbouring Punjab Districts, and the Commissioner transferred his head-quarters to Ambála.

Relations with Tributary States.

Principal events.

3. The Ruling Chiefs attended the Viceroy's public entry into Delhi in December 1912. The Maharaja of Nábha was installed by the Political Agent at Nábha, and Mian Jogindar Sen, a minor relative of the late Raja of Mandi, was seated on the *gaddi* by the Lieutenant-Governor at Mandi, the management of the State being temporarily left in the hands of the Wazir under the supervision of the British Settlement Officer. The settlement of Máler Kotla was completed, and an officer was lent by Government for a similar purpose in the Kalsia State.

Frontier Affairs.

Biluchistan.

4. The frontier was quiet. The Chief of the Mazari Tuman, the Hon'ble Nawab Sir Bahram Khan, was honoured with the title of K.C.I.E. in recognition of his conspicuous services.

Administration of the Land.

Land Revenue.

5. The kharif crop of 1911 was a poor one. Owing to early and late droughts, 31 per cent. failed of sowings that were 36 per cent. below normal. A bumper rabi followed, a record crop was harvested in the Ambála and Ráwalpindi Divisions, and the extensive failure of the kharif was quite made up for, from the revenue point of view. The total matured area, however, fell short of the normal by two million acres.

The fixed land revenue of Rs. 213·7 lakhs was all collected except 2·8 per cent. (about Rs. 5 lakhs) left under suspension at the end of the year. In addition, Rs. 2·12 lakhs of last year's balances were collected, and the recoverable balance now stands at Rs 6·4 lakhs. The fluctuating land revenue rose to Rs. 87 lakhs, being ·29 per cent. of the total demand, against last year's fraction of one-quarter. The increase of 16 lakhs is very largely due to re-assessments in the Canal Colonies. The sale of proprietary rights in the Lower Chenab Colony realised no less than Rs. 61 lakhs, under the head of "Other land revenue." The collection of land revenue proceeded smoothly: there was an appreciable diminution in the number of processes issued for compelling payment, and in some districts revenue was paid in while still under suspension.

The position of peasants.

6. The fact that the value of land and the position of the peasant continue to improve is illustrated in several ways by the returns of the year. The number of sales was greater than in any year since 1900-01, the area sold exceeded the quinquennial average by 13 per cent., and the price by Rs. 9 per cultivated acre: mortgage money rose from Rs. 101 per acre to Rs. 106, and mortgagees were found giving exceptionally favourable terms to mortgagors. The bulk of the transfers of rights in land were among the peasant proprietors themselves and the area of land held by the non-agricultural population diminished by 30,000 acres. There was a large decrease in the number of suits for ejectment of tenants and for enhancement of rent. The proportion of unsuccessful suits, too, was lower than in the preceding year, which is a satisfactory feature if it indicates a decrease in the volume of vexatious litigation. The relations between landlord

and tenant are satisfactory. There is a further increase this year in the number of owners and holdings, pointing to more extended sub-division of joint estates, which will perhaps result in more intensive cultivation. The wages survey conducted in December 1912 shows that the rates paid to all classes of labourers, including the ploughman and the unskilled country labourer, have increased since the preliminary survey of December 1909. The increase is widely spread and the substitution of cash wages for grain has advanced rapidly until now only four districts report grain wages: the farm-hand is now much more independent and partakes along with the landowner and tenant in the general agricultural prosperity.

The Canal Colonies.

7. In the Lower Chenab Colony there was an increase in cultivation, bringing the sown area up to 4 per cent. more than the area of irrigation allotted to the colony. This excess was balanced by remissions for failure of crop, the net result being that the colonists matured cent. per cent. of their allotted acreage. In the Jhelum Colony the sowings were 3 per cent. less than the allotted area, and 10 per cent. failed, so that though the result was good on the whole, there is room for improvement in water distribution, which is likely to be effected in the next few years. Fodder crops despatched by rail at reduced rates to districts which had suffered from the poorness of the kharif brought in large profits to the favoured tracts served by these two canals,—a fact which further illustrates the advantage provided by a liberal supply of canal water. The growing wealth of the canal colonists was displayed in the extensive purchases of proprietary rights and in the record entries of horses, mules and donkeys at the various fairs held during the year at Lyallpur, Háfizabad and other places.

The Colonization of Government Lands (Punjab) Act, 1912, became law on June 28th, 1912, and was well received: its effect will be judged next year. The new assessments mean an increase of 109 per cent. in the Gugera Branch, II Circle, and of 208 per cent. on the Lower Jhelum Canal. These increments which are tempered by the progressive system of enhancements bring into high relief the enormous advantage hitherto enjoyed by the colonists, in the shape of a practically nominal land revenue demand. The market towns are prospering, but not yet self-supporting, and further taxation of the grain merchants and middlemen would seem to be desirable as well as equitable.

Professional Surveys.

8. The riverain party of the Survey Department continued its useful work of assisting revenue surveys by laying down base lines of squares on the banks of the larger rivers and co-ordinating the cadastral surveys on opposite banks. Maps were also supplied to five Settlement Officers. The rectangular surveys of the areas commanded by the Lower Bari Doab, the Upper Chenab and Upper Jhelum Canals were completed, and will be invaluable when the colonization of those tracts is commenced.

Revenue Surveys and Settlements.

9. Settlement operations were concluded in the Lower Chenab and Jhelum Colonies and in Kulu, Gurdáspur and Hissar. Seven other settlements were continued during the year, of which the Hoshiárpur and Ferozepore settlements were about half done and those of Amritsar and Gujránwála nearly completed. New settlements were begun in Lahore and Gujrat: that of Jullundur was sanctioned to commence in the cold weather of 1913-14.

Land Records.

10. The system aimed at by Colonel Wace some 30 years ago of revising the maps and records of districts before re-assessment has been tried in three districts, with the object of shortening the duration and cost of settlements and at the same time of improving the accuracy of the records. The experiment has not been altogether satisfactory. On the other hand, the association of the Director of Land Records with the revision of maps and records of districts under the settlement has had excellent results, and still further improvement may be expected from the amalgamation of the district and settlement kanungo staffs.

Legislation.

11. The constitution of the Council was altered during the year, three members elected by District Boards being substituted for three nominated members: there was a general renewal of nominated and elected seats. Six Acts of the local legislature became law, and twelve Acts of the Imperial Council more particularly affecting the province were passed. The local enactments include the Punjab Courts (Amending) Act, the Colonies Act, the Punjab Panchayat Act and others. The Imperial Acts dealt among other matters with Criminal Law Amendment, Official Trustees, Waqf Invalidation, and Companies.

Police.

12. The criminal statistics of last year, which caused the serious remarks in paragraph 20 of the Administration Report (Part I), were in 1912-13 exceeded by 13·5 per cent. Murders and dacoities increased by 8·4 and 15 per cent., respectively.

The total number of true cognizable cases dealt with by the police was over fifty thousand, and eliminating offences against religion, and public nuisances, the increase amounts to nearly 14 per cent. on last year's figures. It is true that more crime is now brought to light, since the improvements effected in the police force, but there has been a real increase in crime, especially serious crime. This is due partly to the growing spirit of disregard of authority, partly to the high standard of proof exacted in the law courts, and partly to the apathy or hostility of public opinion, especially in the tracts about Lahore and Ráwalpindi. Government is hopeful, however, that the wave of violent crime can be dealt with by special measures for strengthening the magistracy and police, increasing the efficiency of both these agencies, and by endeavouring to enlist the active co-operation of the community on the side of law and order.

There were some notable captures of armed murderers and dacoits during the year, and only two raids from across the frontier penetrated into Punjab Districts, while unarmed villagers on several occasions successfully resisted armed bands of dacoits, and were rewarded accordingly. This is the other side of the picture, and there are distinct signs of a leaven working within the Punjab which will in time, it is hoped, effect a radical change in the minds of the people. Efforts to restrain and reclaim the criminal tribes are proceeding *pari passu*. A satisfactory tendency of certain tribes to reform themselves is noticeable this year, and the success of the efforts of the Salvation Army is recognised in the Report on Criminal Tribes. A committee has been appointed with wide terms of reference to report on the whole question of the control and reformation

of these tribes. The present state of crime in the Punjab is undoubtedly serious, but the resources of Government under the present law have by no means been exhausted.

Criminal Justice.

13. The year was marked, as observed already, by an increase in all the more serious classes of crime and by the growing inadequacy of the criminal administration to cope with it. The figures of cases and persons brought to trial are 6 per cent. in excess of the record established in 1911. The growing contempt for law and order, side by side with the introduction of modern conditions of prosperity in the Punjab, has produced a state of affairs which calls for special efforts to deal with it. There is valuable property awaiting the burglar in most well-to-do houses, and the agriculturist has more time on his hands and more money to spend on drink and litigation The abnormally low proportion of the female population is also at the bottom of much of the violent crime of the Province. Government has signified its intention of considering proposals for the more general extension of the system of marriage registration which is established in some districts, and recognises that in cases of offences against the marriage laws the punishment of the guilty wife would be in accordance not only with the ideas of the people, but also with the views of a large number of officers responsible for the administration of the law. The prevention of the frequent abuse of section, 107 of the Criminal Procedure Code is also engaging the attention of the authorities.

At the same time the subordinate Magistracy is inclined to insist on too high a standard of proof and to allow criminal cases to be prolonged and witnesses discouraged by unnecessary adjournments. The Lieutenant-Governor has remarked that while it is the duty of the Magistrate to see that the person accused of crime gets justice and fair play, it is also his duty to society and to the administration to see that crime and criminals do not go unpunished. At present 22 per cent. only of the persons brought into court are convicted.

The disposal of criminal cases during the year was nearly 8,000 in excess of last year's total. Towards this result the Honorary Magistrates rendered valuable assistance and Sessions Judges did good service in disposing of a largely increased number of cases. But District Magistrates failed as in previous years to try a sufficient number of cases in the exercise of their enhanced powers under section 30 of the Code of Criminal Procedure, and His Honour has reminded them that the preservation of law and order is their first duty. The number of criminal appeals and revisions pending in the Chief Court was higher than it had been for some years past: and there is a steadily increasing delay in the disposal of appeals by Government. The number of murder references dealt with was, however, as high as 133, and it is hoped that the confirmation of the death sentences in a larger proportion of cases than in 1910 and 1911 will have some effect in checking the increase of this form of crime. It is recognised by Government that the diet money allowed to witnesses is, in present conditions, inadequate, and the question is receiving consideration.

Prisons.

14. The policy of concentration was continued and the District Jail at Lahore was constituted a first class Central Jail (the Borstal Central Jail),

two other District Jails being converted into subsidiaries: three other subsidiary jails are being built. The accommodation is still insufficient for the proper classification of prisoners and the segregation of long-term convicts, and over-crowding of jail sites occurred at fourteen places, but room for 1,240 more prisoners will be available shortly and the results will be watched. Two camps were formed at Dera Gházi Khan and Multán.

Discipline was well maintained, and though there were nine escapes, there were also nine re-captures. There was a marked decrease in the number of punishments of prisoners, and the convict officers behaved extremely well: stipends for these have been sanctioned, and the policy of humane treatment of prisoners generally is having excellent results. The jail staff are well managed and worked with a will.

As regards the non-penal aspects of the treatment of prisoners, a most interesting description is given in the Report on the Administration of the Jails of the way in which all the forces of reclamation, physical, mental, moral, and religious, are brought to bear on youthful convicts. There are some signs that the great religious communities of the Province are awakening to a consciousness of their opportunities of co-operation in this great work. Moreover, a purely indigenous Temperance Society has been formed at Amritsar, and the committee proposes to send emissaries to Lahore to work among the inmates of the Borstal Jail. A large share of the credit for rousing public interest in the work of prison reform belongs to the Salvation Army, and a system has been introduced for the transfer of prisoners with their consent, from the Borstal Central Jail to the Danepur Settlement at Lahore. A *maulvi* and a *pandit* have also been appointed to minister to the Muhammadan and Hindu prisoners there, and the results of the whole scheme so far have been entirely good.

The disquieting features of the report are the rise in the number of admissions and the increase in the number of those released on appeal. The number of admissions is the highest since 1903, and is of course the direct outcome of the increase in crime which has been described above.

The year was a healthy one, and the death rate fell to 18·88. In order to deal with tubercle in prisons certain measures have been approved, including the provision of a special jail for tubercular patients.

Civil Justice.

15. The decrease in civil litigation noticed last year has proved to be merely a temporary lull, and the figures of institutions this year show a rise of 9·6 per cent., in spite of the exclusion of Delhi. The increase is common to almost all districts. Suits for money or movable property rose by 9 per cent. and suits for title and other suits by 13 per cent. Nearly half the suits instituted were below Rs. 50 in value, and it is hoped that much relief to the courts will be afforded when the Civil Panchayats Act comes into full working: it is being introduced tentatively in selected districts.

The abuse of the Insolvency Act was noticed two years ago, and is especially apparent in the year under report, during which 286 petitions were presented in Lyallpur and Jhang alone, against 110 in those districts last year, in spite of a favourable agricultural year. The Judges have been asked to institute enquiries with a view to checking any abuses of the Act that may be established.

The administration of the Guardian and Wards Act is not altogether satisfactory, and the courts take on themselves a great deal of unnecessary work. It is hoped that the enquiries now being made by the Judges will result in a considerable reduction in the amount of work under the Act.

The number of officers employed on civil judicial cases was less by 15 than in 1911, but the number of suits decided rose by 16,538, which is a very satisfactory result, particularly as many courts had heavier criminal work to dispose of. The average duration of suits, however, rose perceptibly. Appellate work was heavier in the Divisional Courts and the outturn larger than last year, while appeals decided by the Chief Court increased by 75 per cent

Registration.

16. The decrease in the number of compulsory registrations noticed last year was not continued, a rise of 13 per cent. making the figure higher than in any year since 1909. The increase is attributed to a year of agricultural prosperity and freedom from plague, with special causes prevailing in certain districts. The value of the property transferred increased by 24 per cent., owing to the steady rise in prices of immovable property.

Local Self-Government.

District Boards.

17. The working of the district boards again appears to be on the whole satisfactory, and there seems to be a growing tendency on the part of the members to interest themselves more than before in the duties of their position. It is but natural to expect that the interest which members show in the working of the boards should be largely influenced by the opportunities afforded of promoting schemes beneficial to the district as a whole or to the particular localities they represent. These opportunities depend mainly on the financial resources of the boards. As long as these resources merely sufficed for the maintenance of existing institutions and afforded no scope for a policy of improvement, a certain apathy on the part of the members was only natural. But the great expansion in the revenues of the boards within the last few years owing to the generous subventions from Government for the improvement of sanitation, education and communications, and the raising of the local rate in some districts and of the land-revenue on which it is calculated in others, has enabled nearly all the boards to embark on a progressive policy of development. The interest not only of the members but of the general public in the proceedings has consequently received a much needed stimulus, and there are many indications of the growth of that spirit of public interest and public duty which is the essential basis of all healthy local self-government.

Serious efforts are being made to improve and exploit the valuable wayside groves and trees which are the property of the boards, and although failures occasionally occur and waste ensues, there is every reason to anticipate better returns from this source of revenue in the future.

The establishment of training classes and schools for teachers is being gradually developed in several districts, and nearly two lakhs of rupees were spent on education this year in excess of the outlay of last year.

Further assistance in the matter of road-maintenance is contemplated by Government, which during the year put six lakhs of rupees at the disposal of the boards for this purpose, and it is probable that many district boards will soon be able to entertain highly qualified Engineers.

Three members for the Local Legislature were elected by district boards during the year.

Municipalities.

18. The elections were briskly contested in the Gujrát District, and in Rohtak votes were undoubtedly bought and sold, but in most towns the candidate who thinks he is not likely to succeed retires before the actual polling commences, and the growth of interest in representative institutions is slow throughout most of the Province. The working of the various committees continues to be vigilantly watched, and was on the whole satisfactory.

There was a large rise in the income from octroi, owing to the overhauling of certain badly managed municipalities and the revision of the schedules of others. The cost of collection remains about the same, varying from four to twenty-two per cent. Three towns are taking steps to substitute a terminal tax for octroi, an experiment which, if successful, will prove a valuable object-lesson. The system of refunds is receiving special attention in several municipalities in which they form a high percentage of the octroi. The income from irrigation by sewage is rising in the larger towns and promises to become a considerable item in their revenues. Grants from Government increased very largely and were expended chiefly under the head of Public Health and Convenience.

AGRICULTURE.

Scientific.

19. A prominent feature of the year's work was the successful hibernation of the boll-worm parasite, which can now be distributed during the seasonal outbreaks of the pest. The cause of root-rot in cotton has also been traced to an insect. Experiments with wheat and cane were continued, and varieties of frost-resisting canes discovered The wheat survey was carried on in three districts. Some progress was made in bringing portions of the Western Punjab hills under olive cultivation, and the study and improvement of date-palms is proceeding on proper lines.

Co-operative Societies.

20. The co-operative movement continues steadily to expand and to flourish. There has been a further large increase in the number of agricultural co-operative societies and the capital controlled by them, the figures being 2,780 and Rs. 80 lakhs, respectively. At the same time the societies are shouldering more of the burden of inspection, and the cost of each society to Government has decreased. Five new central banks and three unions were opened during the year, and central banks started three years ago are already found paying 10 to 12 per cent. There is an element of potential weakness in the large amount of loan repayments which are overdue, amounting to 16 per cent. of the issues. The non-agricultural societies are not doing so well on the whole, though some are in a flourishing condition.

Veterinary and Live-stock.

21. The addition of four to the number of Veterinary Hospitals and a twelve per cent. increase in the cases treated at those institutions mark the veterinary progress of the year. The experiment of taking fees for inoculations was unsuccessful and has been abandoned. The causes of contagious pneumonia among hill goats were investigated. Suggestions are made by the Superintendent for the control of the indiscriminate letting loose of Brahmini bulls, but the only practicable means of preventing deterioration of stock seems to be the increased provision by district boards of good bulls. Merino sheep breeding is beginning a promising career. The Army Remount Department report that all the fairs in the selected districts were successful, except one where shortage of fodder contracted entries. There were very large entries at all the Canal Colony fairs, and though the Mona stud has been abolished owing to lack of good country-bred mares, the success of horse-breeding in the Chenab Colony especially is established.

Hissar Farm.

22. The Government Farm at Hissar suffered again from a partial failure of the monsoon and a consequent shortage of fodder. But the cattle were kept healthy, and a record number of bulls was issued to district boards. The poor seasons have had their effect on the calving, the number of calves born being lower than it has been for some years. The demand for Hissar cattle is increasing and the number of cows will have to be raised to meet it. The breeding of mules, donkeys and sheep was satisfactory.

Weather and Crops.

Harvests of the year.

23. The total area sown during kharif 1912 was approximately normal, and owing to the late arrival and early cessation of the monsoon an unusually large proportion of the sowings were irrigated. The rain came in heavy bursts in July and August and benefited the sugarcane, but unirrigated crops suffered from the fitful character of the monsoon. Cotton was sown after late rains in April and on irrigated lands did well during the dry months, while the rain when it came was well-timed for washing boll-worm out of the plants. Sugarcane also benefited during the winter by absence of frost, and there would have been a bumper outturn of gur if scarcity had not necessitated the use of cane as fodder. The dry areas on the south-east and north-west suffered to some extent, and so did the south-western portions where inundation canals ran poorly: the net result was a failure of 24 per cent. of nearly normal sowings. The dry areas fared badly also in the *rabi* harvest, there being very little rain after September until the second half of February. The canals were worked to their fullest extent, and it was only the good rain in February and March which saved the *barani* areas. The proportion of the sown area irrigated was 42 per cent., of which nearly one-third was watered from wells and the bulk of the remainder by canals.

Prices.

24. The prices of the most important crops rose even higher than last year: wheat averaged Rs. 3-1-0 per maund and cotton Rs. 7-15-0. Raw sugar, however, dropped seriously from Rs. 5 6-0 to Rs. 4-7-0 per maund. The prices of jowar and bajra fell, but maize, barley, gram and oil-seeds were steady. The year on the whole was a favourable one for the farmer, and, except in Jhelum and Ráwalpindi, stocks of grain were sufficient.

TRADE AND MANUFACTURES.

Internal Trade.

25. The figures for the triennium ending 1913 shew a substantial increase in the value of the total exports of 23 per cent. and of 17·6 per cent. in the value of the total imports for the three years as compared with the preceding triennium. Taking the average of the years in each case the increases amount to Rs. 535 lakhs and Rs. 441 lakhs, respectively, while if the year under report is compared with last year the rise in value was 16 per cent. in the case of exports and 5·8 per cent. in that of imports. Prices were approximately normal in the first year of the triennium ending 1913, except that cotton touched a record figure, and were high generally in the two succeeding years. Harvests were good except for the kharif 1911. Altogether the farmers prospered during the triennium under report.

Cotton goods and sugar still form the largest proportion of the imports, but coal and coke imports nearly doubled during the triennium, while a quantity of metal goods for building purposes came in for Delhi and the prosperous canal colonies. Nearly the whole of the imported treasure was in sovereigns, the increase for the triennium amounting to Rs. 489 lakhs out of a total of Rs. 1,000 lakhs of treasure imported, the remaining imports exceeding the exports by Rs. 331 lakhs for the triennium.

The most prominent feature of the exports is the sudden rise of the barley trade with the United Kingdom, the maundage of this grain rising from 14 lakhs in 1910-11 to 73 lakhs this year. The sudden demand was due to failure of barley harvests in other countries, and the windfall has benefited more particularly the Cis-Sutlej tract, where are situated the poor dry-area districts of the south-east, which are always the first to suffer from a weak monsoon. Probably for the first time since the canal colonies were fully developed, this tract exported more than the tract between the Sutlej and Jhelum.

Trans-Frontier Trade.

26. The figures for the triennium ending with the year under report show a decided increase both in exports and imports over those of the previous triennium, but the values are lower in each case than those of the three years 1904–07. Allowing for statistical changes and errors, there seems to have been a real rise in the three years ending 1913. The trade with Afghánistán fluctuates in a puzzling way which cannot always be explained by high or low prices in the Punjab. As regards Ladákh, the import of borax has declined and that of raw wool has increased, while *charas* has remained fairly steady in spite of the increased duty. Exports of Indian tea and cotton piece-goods have much improved. The same facts apply to the trade with Tibet, except that imported salt and exported silver have increased very considerably, and there is no trade in *charas* and very little in tea. It has been decided to retain for another year two trade posts experimentally established at Patseo and Sangla Dogris.

Industries.

27. The out-put of the coal mines increased by 25½ per cent. in spite of the closing down of one mine. The four Government salt mines also increased their production, which rose to 131,233 tons. The amount of petroleum extracted decreased while that of saltpetre considerably increased. The number of factories decreased owing to the non-working of 26 during the last two years, but the number at work increased by eleven. The rise of 4,681 in the number of operatives was divided nearly equally between

Government factories and cotton-ginning and pressing mills, which altogether employ 26,000 out of the 32,865 hands at work in Punjab factories. There were fewer inspections owing to the condemnation by the Factory Commission of amateur inspections, and the appointment of a whole-time Inspector should lead to a closer observance of the rules framed for the management of factories.

Joint-Stock Companies.

28. No less than 44 companies ceased working, more than half of which were of the dishonest type of provident societies which have been stopped by the new Act. The Criminal Investigation Department were actively engaged in prosecuting a Marriage Fund Society which had caused considerable distress in the Miánwáli District. The lack of business knowledge and methods in the Punjab generally is exemplified by the failure of 20 per cent. of the companies in existence in a year of agricultural prosperity, and public confidence in the management of such enterprises has been somewhat rudely shaken.

Forests.

Trees and waste.

29. The classification of forest lands into "land under forest growth" and "waste land" was begun last year and corrected during the year under report: it is designed to show roughly which divisions are more valuable. The figures cannot yet be accurate, but taking them as roundly correct they show that it is not (at present) the better afforested areas that pay the most. The steep forest-clad Himalayas are very difficult to exploit, while the charcoal, firewood and grass of the Lahore Division find a ready market in the capital of the Province. Grazing fees are also comparatively easy to collect and pastures demand little outlay on management. The largest surplus is shewn by the Lahore Division ($1\frac{3}{4}$ lakhs) which has a comparatively small area, followed by Montgomery, where there is no forest growth at all, while Kulu, which has as much area fully afforested as the whole of Montgomery Division, besides twice as much waste, takes only a third place. The plantations in Montgomery and Multán are being sown and they will be easy to exploit and perfectly accessible. At present, however, there is a growing demand for coal fuel, and it is possible that the prices of wood fuel will fall too low for a sufficient profit on these plantations to be possible. The matter is receiving the closest attention.

Grazing.

30. In Kángra proper, where the forests have suffered much from over-grazing, it has been decided to resort to more extended closures, and it is hoped that in this way it will be possible to effect improvement in those areas which have deteriorated as a result of the excessive exercise of the grazing and browsing rights of the people. Sanction has also been given to a three years' assessment of a tax on all animals grazing in the Kángra forests, levied under the provisions of the Land Revenue Act.

Public Works.

31. In the past this Department has suffered from want of funds necessary to enable it to keep pace with the growing requirements of the Province, and the cost of establishment as compared with the total expenditure was consequently very high, averaging 30·95 % in 1909-10 and 30·12 % in 1910-11. Since 1911-12 the improvement of the Provincial finances has enabled Government to make larger allotments for Civil Works, and the establishment percentage has accordingly been reduced to 17·57 % in 1911-12 and

15·54 % in 1912-13 : at the same time it has not been found possible to utilize the increased grants in full owing to necessary schemes not being ready. This defect is now being steadily remedied, and a fairly complete programme is now being vigorously worked up to This year the Department spent nearly 80 lakhs as compared with 61½ lakhs last year, the principal feature being an increase of Rs. 13 lakhs debited to contribution works. Out of a grant of Rs. 78 lakhs for Provincial Civil Works, however, only Rs. 59·3 lakhs could be spent, the remaining Rs. 18·7 lakhs lapsing chiefly owing to delay in acquiring or selecting the sites of the works in question.

Railways.

32. The year was a prosperous one for the North-Western Railway which paid 5·77 per cent. on the capital outlay against 4·38 per cent. last year. The Lahore-Raewind section was doubled, the twenty-eight miles of the Jullundur Doab Railway were opened and the remodelling of the Lodhran station completed. The Beas Bridge was in progress.

Irrigation.

33. The area under the charge of the Department increased by some 60,000 acres. The principal feature of the year's report was, however, the working of the Upper Chenab Canal, the first link of the great Triple Project which will soon be in full operation. Irrigation from this canal was begun a year earlier than was originally estimated, and 116,162 acres were irrigated against a maximum of 40,000 acres estimated for the first year : in addition 30,525 acres were irrigated by escape water passed through the Deg Nullah, partly within the area of the Ravi Inundation Canals. The progress made on the Upper Jhelum Canal was also most satisfactory, and it is now expected that the second link in the Project will be in working order for the *rabi* of 1914-15. The Ravi too has proved much more amenable than was anticipated, and the Lower Bari Doab Canal was opened just after the close of the year under report. The older canals worked satisfactorily, and the work done at the Central Canal Workshops, Amritsar, was most useful. All the machinery for weirs and level crossings and minor canal necessities is being supplied from these works.

Revenue and Expenditure.

34. The revenue raised in the Province amounted to Rs. 874 lakhs, an increase of Rs. 66·4 lakhs on that of last year. Detailed figures are given in Part II, paragraph 36. There was a remarkable rise of Rs. 56 lakhs in *Irrigation* receipts from major works, and consequently no assignment from Imperial Revenues was necessary in order to make up the net minimum income of Rs. 41 lakhs from Irrigation guaranteed to Provincial Revenues. Six lakhs of the increase were due to *Excise*, over 3½ lakhs to *Land Revenue*, and 2½ lakhs to *Stamps*. *Income-tax* produced an additional Rs. 68,000, and there was an enhancement of the same amount in the receipts from *Minor Irrigation Works*.

The total expenditure for the year amounted to Rs. 549 lakhs, which is more by Rs. 33 lakhs than that of last year. The chief increases were on account of *Education* Rs. 10·8 lakhs, *Major Irrigation Works* Rs 9½ lakhs, *Civil Works* Rs. 6 lakhs, and *Medical* Rs. 4½ lakhs. The cost of the *General Administration* decreased by over one lakh, and of *Minor Irrigation Works* by Rs 99,000.

Vital Statistics.

Public Health.

35. The year like its predecessor was a healthy one: the incidence of plague and malaria was comparatively slight, though there was considerable mortality from small-pox in some places. The recovery of Amritsar from the terrible fever epidemic of 1908 is remarkable. The increased healthiness of the inhabitants of the Province generally is shewn in the rise of the birth-rate to 45·3 *per mille* and the decrease of the death-rate to 26·6 *per mille*, resulting in an excess of births over deaths of 18·7 *per mille*. Small-pox carried off 30,339 persons, chiefly infants, and as usual the towns to which the Vaccination Act is applied were less severely visited than those where vaccination is optional, the average figure for the former being 2·48 deaths *per mille* against 8 to 18 *per mille* in the case of the latter. The year showed a decrease of 163,000 in the number of deaths from plague. Deaths from fever were 1·11 *per mille* lower than in the previous year. The female infant mortality was again less than the male.

Medical Relief.

Hospitals.

36. The number of dispensaries and hospitals in the Punjab increased slightly by 4 to 469, at which some 4½ millions of patients were treated, an increase of nearly half a million on last year's figures. The Government review of the medical report for the year points out some discrepancies which throw doubt on the statistics given in the report, and next year's figures will perhaps better show the real position. There has been an increase in the number of beds in hospitals and there is said to have been an increase of 10,000 in the number of in-patients.

Operations.

37. Surgical operations increased by some 20,000, and the rise was common to major and minor operations alike. The percentages of success, also, show an increase. The already high proportion of cases of lens-extraction which resulted in good vision has risen still more, and now less than six persons out of every hundred treated for cataract in this way go home without good sight. The death-rate has decreased to ·22 per cent. and in cases of hernia and ovariotomy, though the operations themselves were three and four times more numerous than those of last year, the number of deaths has not increased. Similar success in a slightly less degree was attained in operations for stone. These very satisfactory results would have been impossible but for the large grants, aggregating 10·55 lakhs, provided by Government and local bodies.

Sanitation.

Sanitation.

38. There is very little to record this year regarding the progress of sanitation in the Punjab, beyond the large increase in expenditure by municipalities and district boards. The whole policy of the Province is to be revised, and an important conference held after the close of the year recommended certain lines of action and guiding principles: an account of the resolutions passed and the action taken by Government thereon properly belongs to next year's administration report.

It is enough to mention here that the expenditure in municipal committees rose by 21 per cent. and in district boards by 40 per cent., and that there seems to be plenty of room still for improvement in municipal incomes from sale of street-sweepings and sewage-irrigation. The work of cleaning and fencing wells in villages resulted in figures that are nearly double those of last year, while the cost was less.

Arrangements made for the large fairs were adequate. Out of the lakh-and-a-half grant given by Government, the Sanitary Board were able to allot Rs. 1,10,664 to be spent on water-supply, drainage, &c., in various towns.

Education.

Progress in Education.

39. The year has been one of great progress in almost every branch of education. Large grants were made from Imperial and Provincial revenues, and are given in detail in Part II, section 54. There was an increase of 352 in the number of educational institutions and of 21,685 in that of pupils, figures which would be higher if those relating to Delhi and its environs were excluded from this and last year's totals. The percentage of children of school-going age who attended school has increased in the case of boys and girls alike. The recurring "Darbar" grant was utilised for raising salaries of teachers in primary schools and for vernacular school buildings. The system of basing grants on teacher's salaries was extended to municipalities. At the same time committees were relieved of the liability to pay grants for secondary departments of Anglo-Vernacular Schools. No less than 146 Primary Schools, 49 Middle Schools, 31 High Schools and 43 hostels were constructed during the year. The raising of fees has been of great assistance, especially in private secondary schools, the managers of which are now in a better position to enforce discipline. A general improvement is reported in the qualifications of teachers, and there is no longer a dearth of recruits for the training classes.

In the case of colleges, fees increased by ½ of a lakh, and the examination results are better than before. Science teaching and hostel have received most of the grants this year. Buildings were acquired for the Law and Oriental Colleges and the University premises improved. Of the Professional Colleges, the Agricultural College is not at present proving a success, but the Veterinary College has done so well that the need of another such institution for Northern India is apparent. The Engineering College at Rasúl is supplying a long-felt want, while the Mayo School of Industrial Art is being extended, and classes have been opened in connection with schools of the general line.

Girls' schools have increased by over 11 per cent. and now number 745, at which 37,485 girls were taught. Training classes are provided by the Kinnaird High School, which has been affiliated to the University in Physics and Chemistry up to the Intermediate Standard. Kindergarten teaching is very much needed in the lower schools. Special efforts were made during the year to improve the buildings of girls' schools. The Queen Mary's College at Lahore was completed.

Good progress was made in schools for Europeans. Provincial funds were devoted to buildings and salaries, a special subsistence allowance being given to members of religious orders. The improvement of these schools is general and well-maintained.

The report of the Aitchison College shows an advance in attendance and in the results of the Diploma Examination. Defects in science teaching are being removed. The College won the Patiála Challenge Shield for the first time.

PART II.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Survey and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

1. Sir Louis William Dane, G.C.I.E., C.S.I., D.O.L., held charge of the office of Lieutenant-Governor throughout the year.

2. Owing to the separation of the Delhi Province from the Punjab and the transfer of parts of the old Delhi District to the Rohtak and Gurgaon Districts, it was decided to constitute the tahsils of Palwal and Ballabgarh in the Gurgaon District, and the tahsil of Sonepat in the Rohtak District into sub-divisions to be known as the Palwal and Sonepat sub-divisions, respectively. At the same time the head-quarters of the old Delhi Division were transferred to Ambála, which now gives its name to the Division.

8.—Relations with Tributary States and Frontier Affairs.

General.

3. Last year's report should be referred to for information as to the last census and the Imperial Service Troops. The death of Major E. J. M. Molyneux, D.S.O., Inspecting Officer and Officiating Inspector-General, occurred suddenly at the close of the manœuvres and was a serious loss to the troops for whom he had done so much.

I.—Phulkian States and Bahawalpur.

PATIALA.

Area, 5,412 square miles; population (1911), 1,407,659; gross revenue, Rs. 86 lakhs; army and police, 5,297; Chief, Sir Bhupindra Singh, G.C.I.E., Sidhu Jat, aged 22; has a male heir; title, Maharaja; salute, 17 guns.

Nizamats.	*Area, square miles.*	*Population.*	*Tahsils.*
Rámgarh ...	1,835	425,324	Patiála, Bhawánigarh, Sunám, Narwána.
Pinjaur ...	825	183,314	Pinjaur, Rájpura, Banur, Ghanaur.
Amárgarh ...	855	265,138	Amargarh, Fatehgarh, Sáhibgarh (Pail).
Anáhadgarh...	1,836	379,971	Anáhadgarh, Bhikhi, Govindgarh.
Mohindargarh	576	153,912	Mohindargarh, Narnaul.

General.

4. The Viceroy and Lady Hardinge visited the Maharaja at Chail in September 1912, and Sir Louis and Lady Dane paid a farewell visit at

Patiála in February 1913. A sum of Rs. 30,000 was offered by His Highness as a reward for information which would lead to the detection of the authors of the Delhi outrage. The question of an exchange of hill territory with the British Government is still pending.

The Maharaja's third marriage was celebrated at Patiála in October, and the birth of a son and heir, the Tikka Sahib, to the senior Maharani occurred at Patiála on the 7th January 1913. His Majesty the King Emperor telegraphed his congratulations to His Highness on the event.

Administration. 5. The various departments have maintained their efficiency, and there has been no change since the last report in the system of administration.

Finance. 6. The expenditure again exceeded receipts, but there is a large working balance in addition to the fixed reserve, while the actual receipts represent an increase of nearly 15 lakhs on the figure of the year in which the present Ministers took office. One lakh of the Government loan remains to be paid.

7. The revenue from the Irrigation Department reached the record figure of Rs. 23,32,882, while the Rájpura-Bhatinda Railway had a successful year, the Darbar's share representing a return of 13·24 per cent. on the capital. It is now proposed to construct a net-work of feeder lines in the State.

Agriculture. 8. The kharif harvest was above the average and the rabi crop normal. The land revenue was all collected save some 9 per cent., due to suspensions.

Schools. 9. The number of primary schools has been increased by 26, and there has also been a steady rise in attendance. The Mohindra College has made good progress, the grade pay of the masters has been raised and the M.A. class in Mathematics has been affiliated to the Panjab University.

Excise. 10. Boiling of opium before sale has been prohibited in deference to the wishes of Government. The excise income continues to increase.

Public Health. 11. The general health of the people was normal: births exceeded deaths by 11·77 *per mille* of the population. One of the principal public works was the completion of the Lord Hardinge Hospital at Dharampur.

BAHAWALPUR.

Area, 15,000 square miles; population (1911), 780,641; gross revenue, Rs. 39 lakhs; army and police, 1,897; Chief, Sadiq Muhammad Khan, Abbasi, V, Daudpotra, aged 8; title, Nawab; salute, 17 guns.

Nizamats.	*Area, square miles.*	*Population.*	*Tahsils.*
Minchinabad ...	3,528	217,897	Minchinabad, Nahr Sadikiya, Khairpur.
Baháwalpur ...	7,079	305,186	Baháwalpur, Ahmadpur, Allahabad.
Khanpur ...	5,311	257,558	Khanpur, Naushahra, Ahmadpur Lamma.

General. 12. The Nawab was at Gulmarg, Kashmír, in the charge of Major Mackenzie, I.M.S., from May to October, when he returned to Baháwalpur. At the wish of the Council of Regency, and with the approval of Government, the Nawab went to England with Mr. Atkins, Political Agent, and his family, with whom he had spent nearly two months in the State and in Patiála. The party sailed from Karáchi in March and His Highness will, it is understood, return in the next cold weather. He is expected to benefit both physically and mentally from his visit to Europe.

The Lieutenant-Governor spent a few days in the State in December.

Finance. 13. The Financial Member, Diwan Asa Nand, received the title of Diwan Bahadur. The Revenue Member, Mirza Sultan Ahmad, has nearly completed the term for which his services were lent to the State, and the question of its extension or of appointing a successor is now under consideration. The marked improvement in the revenue administration of the State is largely due to his efforts.

The expenditure fell some 15 lakhs short of the income and there is a large reserve in hand. The most salient feature in the year's administration was the introduction of the income-tax which was necessitated by the large canal schemes which have been undertaken.

The Canals and Agriculture.

14. The inundation canals ceased running earlier than usual, and the collection of revenue was not entirely satisfactory, a lakh of rupees outstanding at the close of the year. A new canal, 15 miles in length, has been completed. Lands on the Sadiqia Sharqia Canal were sold for about 9 lakhs of rupees. The Darbar is awaiting the decision of the Government of India upon the division of the water which will be available by the Sutlej Valley Canal Scheme. Mr. J. G. Davis, retired Superintending Engineer of the Punjab Irrigation Department, has been appointed to supervise the Canal Department and to further the Darbar's interest in the new Irrigation scheme. The Cholistan Colony is making satisfactory progress.

The earnings of the Khanpur-Chachrán Railway have failed so far to realise expectations, the scheme of diverting river-borne traffic being an intricate one.

General Health.

15. Public health was good except for an epidemic of small-pox among young children, which was happily of short duration. Much has been done to encourage vaccination by Major Mackenzie whose departure will be a great loss to the Medical Department.

Boundary Dispute.

16. A commission has been appointed by the Government of India to decide the long standing question of the boundary between the State and the Sukkur District of Sind.

JIND.

Area, 1,259 square miles; population (1911), 271,728; gross revenue, Rs. 22 lakhs (including Rs. 3 lakhs extraordinary); army and police, 1,745; Chief, Sir Ranbir Singh, K.C S.I., Sidhu Jat, aged 34; has no male heir; title, Maharaja; salute, 11 guns. The state is divided into the tahsils of Sangrúr, Jínd and Dádri.

General.

17. The Silver Jubilee of the Maharaja's succession to the *gaddi* was celebrated on February 27th, 1913, with festivities at which the Lieutenant-Governor was present. His Highness announced the grant of concessions and measures of reform, including the remission of half a lakh of various State demands.

His Highness the Maharaja attended the ceremonies connected with the State Entry of His Excellency the Viceroy into Delhi on December 23rd, 1912, and was present at a meeting of the Ruling Chiefs of the Punjab, convened to express their horror at the bomb outrage. A crowded meeting of all classes was held at Sangrúr with the same object, and Rs. 5,000 was subscribed by His Highness as a reward for information leading to the apprehension of the culprit.

Finance.

18. The year ended with a surplus balance of 3 lakhs, which was nearly all added to the reserve. The reserve, now 17¾ lakhs, will be used to finance the Jínd-Pánípat Railway. Practically all the land revenue demand was recovered. The Ludhiána-Dhuri-Jakhal Railway paid 7½ per cent.

The Jínd-Pánípat Scheme will, it is expected, be sanctioned shortly by the Government of India.

Canals.

19. The Darbar still hope that it will be found possible to irrigate the Dádri tract from the Western Jumna Canal. The Sirhind Canal irrigation was the most extensive yet recorded, while the Western Jumna also gave water to a greater area than last year.

Schools.

20. His Highness has founded a substantial scholarship to encourage higher education in Europe by State subjects.

Relations with other Governments.

21. The Darbar have co-operated willingly and effectively with the Punjab Government in the measures taken to put down smuggling over the border. At the same time the average duration of cases extradited to the State has been reduced from 64·88 days to 54.

NABHA.

Area, 928 square miles; population (1911), 248,887; gross revenue, Rs. 17 lakhs; army and police, 1,485; Chief, Ripudaman Singh, Sidhu Jat, aged 30; has no male heir, title, Maharaja; salute, 11 guns. The State is divided into the three nizamats of Amloh, Phúl and Báwal.

General.

22. The Maharaja was formally installed by the Political Agent in a Darbar held at Nábha on December 20th, 1912, on the expiry of the period of mourning observed for His late Highness.

A Council has been appointed to advise the Maharaja in judicial matters.

His Highness attended the ceremonies at Delhi connected with Viceroy's entry.

Agriculture.

23. Both crops were considerably below the average, owing to shortage of rain. The Sirhind Canal irrigated 44,419 acres in the two harvests.

II.—States of the Jullundur Division.

KAPURTHALA.

Area, 630 square miles; population (1911), 208,133; gross revenue, Rs. 31 lakhs; army and police, 1,341; Chief, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahlúwália, aged 40; has a male heir; title, Maharaja; salute, 11 guns; tribute, Rs. 1,31,000. The State is divided into the five tahsils of Kapúrthala, Dhilwan, Bholath, Phagwára and Sultánpur.

24. His Highness the Maharaja enjoyed good health throughout the year, and spent the summer months in Europe. He attended His Excellency the Viceroy's State Entry into Delhi on the 23rd December last.

Administration.

25. The State has been administered efficiently during the year under the supervision of Mr. L. French, I.C.S., who has rendered His Highness very valuable assistance. The services of Lala Salig Ram, a clerk in the Accountant-General's office, were lent to the Darbar for assisting in the reorganisation of the State system of finances and to act as Accountant-General.

Revenue.

26. The total income of the State was nearly Rs. 31,00,000 as against Rs. 25,00,000 in the previous year. No details explanatory of this large increase have been furnished by the Darbar.

MANDI.

Area, 1,200 square miles; population (1911), 181,110; gross revenue, Rs. 5 lakhs; army and police, 691; Chief, Mian Jogindar Sen, Rajput Mundal, minor; title, Raja; salute, 11 (eleven) guns; tribute, one lakh. The State is divided into the four tahsils of Nagar-Mandi, Chacheot, Gopálpur and Harabágh.

The new Raja.

27. The Government of India having decided the question of the succession to the *gaddi* of Mandi, Mian Jogindar Sen, a minor, was on the 28th April 1913 installed as Raja by His Honour the Lieutenant-Governor of the Punjab. Proposals regarding the administration of the State during the Raja's minority are under consideration.

Finance.

28. The management of the State during the year was in the charge of the Wazir, M. Amar Singh, under the supervision of Mr. Gordon Walker, I.C.S., who is conducting a revision of the land revenue assessment. The income of the State was Rs. 4,96,484-8-4 and the expenditure Rs. 4,82,351-14-5 during the year. These figures compare with Rs. 4,30,000 and 5,19,576, respectively, for the previous year.

The salt quarries were let out on contract. Salt to the value of Rs. 78,518-8-6 was sold, but this was not equal to the amount realised last year, *viz.*, Rs. 90,680-8-10. The State share was Rs. 66,886-2-6 and the British share Rs. 11,632-6-0.

The important question of the administration of the State forests was kept pending until the succession had been decided.

The marriage of the sister of the late Chief to Raja Gaggan Singh of Núrpur was celebrated during the year.

SUKET.

Area, 420 square miles; population (1911), 54,928; gross revenue, Rs. 2½ lakhs; army and police, 101; Chief, Bhuri Sen, Rajput, aged 28; has no male heir; title, Raja; salute, 11 guns; tribute, Rs. 11,000.

29. There is nothing of special note to record. The income and expenditure are both 25 per cent. higher than last year.

MALER KOTLA.

Area, 167 square miles; population (1911), 71,144; gross revenue, Rs. 12½ lakhs; army and police, 587; Chief, Ahmad Ali Khan, Bahadur, Pathan, aged 32; has a male heir; title, Nawab; salute, 11 guns.

General. 30. His Highness suffered from malarial fever and spent some time by advice at Solon and Simla. He was present at Delhi at the State Entry of the Viceroy.

Finance. 31. The income and expenditure are each some 50 per cent. higher than the figures of last year. The settlement was completed during the year, and the assessment appears to be sound. Certain economies are being effected and financial prospects in the State are better.

FARIDKOT.

Area, 642 square miles; population, 130,295; gross revenue, Rs. 10½ lakhs; army and police, 763; Chief, Brij Indar Singh, Barar Jat, aged 16; title, Raja; salute, 11 guns. The State is divided into the two tahsils of Faridkot and Kot Kapúra.

32. The administration has remained in the hands of a Council of Regency presided over by Sardar Dyal Singh, Man. The Raja studied at the Aitchison College during the year. His health has not been good, and he spent the summer at Kasauli. His younger brother unfortunately died at Lahore in December 1912. His sister was married in March to the Maharaja of Bharatpur.

The expenditure was some 2 lakhs less than the gross income.

III.—States of the Ambala Division.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; gross revenue, Rs. 6 lakhs; army and police, 628; Chief, Amar Prakash, Rajput, aged 24; has no male heir; title, Raja; salute, 11 guns. The State is divided into the four tahsils of Náhan, Pachhad, Ranika and Paonga.

General. 33. Ceremonies of rejoicing in connection with the installation were held in March last at Náhan. It is hoped that the water-works scheme will be completed in due course. No import or export duty is levied in the State.

Boundary dispute. 34. The Náhan-Jubbal boundary dispute is in process of being settled through the Commissioner of Ambála.

MINOR STATES.

State.	Area in square miles.	Population in 1911.	Gross revenue.	Chief.	Race.	Age.	Whether male heir or not.	Army and Police.
			Rs.					
Kalsia ...	168	55,915	2,37,283	Ravi Sher Singh ...	Sandhu Jat	10½	No	196
Pataudi ...	53	15,943	1,18,594	Muhammad Muzaffar Ali Khan.	Afghan ...	53	Yes	64
Lohárn ...	222	18,559	81,200	Amir-ud-din Ahmad Khan, K.C.I.E.	Mughal ...	53	Yes	60
Dujána ...	100	25,485	77,000	Muhammad Khurshaid Ali Khan.	Pathan ...	30	Yes	146

The Nawab of Lohárn has a personal salute of 9 guns. The Nawab of Dujána is under obligation to provide 50 horsemen on requirement.

35. *Kalsia.*—The young Sardar joined the Aitchison College, Lahore in November 1912. Settlement operations have commenced under an officer lent by Government.

Pataudi.—Khan Bahadur Mir Muhammad Nasir Ali Khan was appointed Adviser in place of M. Muhammad Husain.

Dujána.—The differences between the Chief, his sister and younger brother still exist.

Lohárn.—The son of the Chief carries on the financial administration.

IV.—State of the Lahore Division.

CHAMBA.

Area, 3,216 square miles; population, 135,989; gross revenue, Rs. 4 lakhs; army and police, 419; Chief, Sir Bhure Singh, K.C.S.I., aged 44, Rajput; has a male heir; title, Raja; salute, 11 guns; tribute, Rs. 3,800. The State is divided into the five Wazarats of Brahmaur, Chamba, Bhattiyat, Chaurah and Pangi.

General.

36. The Lieutenant-Governor visited Chamba in April. The Raja continues to administer the State in a very satisfactory way. The people are happy and contented, the hospital much appreciated, and the the troops well maintained.

Administration.

37. The Raja has accepted a revised draft of the regulations regarding the postal convention.

Mr. McIntosh, the Conservator, is preparing his final report on the *chil* forests in the Bhattis.

The revision of the tables in volume B of the Gazetteer is nearly completed.

The Raja has also recast the rules as to shooting, and pay of coolies, and has begun to promote fruit growing.

Boundary dispute.

38. The old boundary dispute with the Balun cantonment authorities was settled in the Raja's favour by a commission.

V.—*The Simla Hill States.*

The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including feudatories.	Population in 1911.	Revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.
				Rs.	Rs.						
1	Bashahr ...	3,320	88,957	1,44,442	3,945	Shamsher Singh ...	Rajput ...	75	Raja ...	No	13
2	Bilaspur ...	448	93,107	3,33,425	8,000	Bijai Chand, C.S.I. ...	Do. ...	40	Raja ...	Yes	198
3	Keonthal ...	116	25,354	1,00,971	...	Bijai Sen ...	Do. ...	36	Raja ...	Yes	36
4	Jubbal ...	288	23,727	1,98,063	2,520	Bhagat Chand ...	De. ...	24	Rana ...	Yes	19
5	Nalagarh ...	256	49,230	1,57,460	5,000	Jogindar Singh ...	Do. ...	43	Raja ...	No	88
6	Baghal ...	124	26,006	63,976	3,600	Bikram Singh ...	Do. ...	20	Raja ...	Yes	25
7	Bhajji ...	96	14,972	33,504	1,440	Durga Singh ...	Do. ...	70	Rana ...	Yes	32
8	Kumhársain ...	90	12,219	30,000	2,000	Hira Singh ...	Do. ...	71	Rana ...	Yes	7
9	Kumhársi ...	80	2,208	6,000	180	Hardeo Singh ...	Bo. ...	15	Thakur ...	No	9
10	Taroch ...	67	4,493	5,000	288	Surat Singh ...	Do. ...	26	Thakur ...	Yes	...
11	Balsan ...	51	6,225	18,500	1,080	Bir Singh ...	Do. ...	49	Rana ...	No	...
12	Mailog ...	43	8,663	27,763	1,440	Durga Chand ...	Do. ...	15	Thakur ...	No	16
13	Baghat ...	36	8,797	50,000	Over 132	Durga Singh ...	Do. ...	11	Rana ...	No	43
14	Dhámi ...	26	4,484	30,000	720	Hira Singh ...	Do. ...	36	Rana ...	Yes	25
15	Kuthár ...	20	4,016	17,000	1,000	Jagjit Singh ...	Do. ...	26	Rana ...	Yes	6
16	Sángri ...	15	3,022	2,743	...	Hira Singh ...	Do. ...	62	Rai ...	Yes	...
17	Mangal ...	12	1,267	1,000	72	Tilok Singh ...	Do. ...	62	Rana ...	Yes	...
18	Dárkuti ...	8	521	8,700	...	Ram Saran Singh ...	Do. ...	70	Rana ...	Yes	...
19	Bija ...	4	1,064	8,496	124	Puran Chand ...	Do. ...	17	Thakur ...	No	8

39. *Biláspur.*—The administration has been working smoothly with Mian Durga Singh as Wazir. The birth of a son and heir to the Raja was the occasion of much rejoicing.

Bashahr.—Every thing is going on satisfactorily under Mr. Emerson's management. The settlement of the Rohru tahsil was taken in hand this year. The Assistant Manager is retiring.

Nalagarh.—Stringent economies have been introduced, and it is hoped that the stone quarries which have been leased by the Public Works Department will yield a handsome revenue.

Keonthal.—The settlement is progressing favourably after some initial opposition.

Jubbal.—The management of the State forests has been particularly satisfactory.

Bhajji.—Tikka Praja Lal, heir-presumptive, died during the year.

Kumhársain.—During the year the Tikka Sahib has been receiving instructions in administration and has been empowered to take up petty criminal, civil and revenue suits. In January he was married to a daughter of the Rana of Bhajji. Numerous complaints have been received against the Manager, Sukh Chain Singh, but on investigation no grounds for considering the complaints true have been discovered.

Dhámi.—The Rana of Dhámi received the Order of C. I. E. in recognition of the able manner in which his State is administered.

40. A list of the feudatories of three of the above States was given in last year's administration report, and no changes are reported this year.

Frontier affairs.

41. The peace of the border remained undisturbed during the year. The hills suffered from want of rain and the effects of scarcity. In consequence the number of criminal cases and the value of stolen property reported to the Border Military Police increased, while the recoveries were not so large as previously. There were fewer civil suits, but more criminal cases relating to women. The jirgas, however, worked well and promptly disposed of the cases instituted. The joint jirga of Dera Gházi Khan and Bilúchistán chiefs did valuable service in disposing of 75 cases in which parties belonging to both administrations were concerned. The principal of these was a serious dispute between the Marris on the one hand and the Gurchanis and Bozdars on the other. The Tumandars continued to manage their tribes satisfactorily, and Nawab Sir Bahram Khan, the Chief of the Mazari Tuman, was honoured with the title of K.C.I.E. in recognition of his conspicuous services. The powers of a Magistrate of the 3rd class were conferred upon Sardar Jamal Khan, the Chief of the Leghari tribe, but the management of his Tuman has not yet been entrusted to him and is still in the hands of Khan Bahadur Sardar Din Muhammad.

9.—Condition of the people.

[For information regarding this section *vide*—
Administration Report for the year, 1911-12, paragraph 249.
Moral and Material Progress Report for the years 1901-02 to 1911-12.
Chapter VI below.]

Wages.

42. The first regular survey of wages was held in December 1912 and the statistics are compared in the report with those furnished by the preliminary survey of December 1909. The harvests of 1912 were a good rabi and a nearly average kharif, so that the figures obtained are normal. The towns selected were Lahore, Amritsar and (failing Delhi) Multán: the villages numbered 1,666, four being taken from each kanungo's circle, and returns were received from 97 per cent. of these, the remainder being permanently

or temporarily unsuitable, except eleven, the omission of which has not been explained: measures are being taken to fill up this lack of 3 per cent., which is not large enough to affect the general conclusions arrived at in the report.

43. The rates now reported for urban areas as compared with those of 1909 show an increase in all classes except that of brass, copper and bell-metal workers, in whose case the decrease is due to a falling-off in demand or to incorrect figures given in the preliminary survey. As is to be expected, the wages paid to unskilled labourers, carpenters, and masons in urban areas are much higher than those paid in the country, except in Lahore where the urban rates are very little higher than the rural, and (excluding unskilled labourers) are surprisingly lower than those in Multán. **Urban areas.**

44. The cash rates for rural areas have risen generally: the returns give the range of typical rates and also the most common rate: two figures are frequently given as most commonly paid, and in the comparative table below the higher of such two has been selected in all cases for unskilled labour: the second and third columns show the number of districts where the rates prevailed at each survey:— **Rural areas.**

Rate per diem for unskilled labour.	1909. Districts.	1912. Districts.
Below 5 annas	12	3
5 annas (or fraction)	3	7
Above 5 annas	12	17

In Hissar the typical cash rates were high in 1909 owing to a bumper kharif in that year and have decreased slightly: in Gurgaon the old customary rate of two annas per diem is still the most common wage. In Ludhiána the rise has been very sharp, but in Ferozepore the influx of labourers from Rájputána in 1911 and 1912 seems to have reduced the rates which were previously high. In Lyallpur the unskilled labour market appears to be glutted at last and wages are stationary. Grain wages are given less frequently than before: they were reported by fifteen districts in 1909 and by four only in 1912: the percentages of villages reporting cash and grain wages for unskilled labour are:—

	Purely cash.	Cash with grain or other supplement.	Purely grain.
1909	49	48	3
1912	58	40	2

The wages of village artisans are reported from 89 per cent. of the selected villages in the case of carpenters, 19 per cent. in that of blacksmiths, and 75 per cent. for masons. Blacksmiths generally get a share of the produce, and if they take non-agricultural work, are paid by the job: being reported from so few villages, the returns in their

case cannot be considered representative. In the case of carpenters and masons the same rise is apparent as in the wages of other classes of labour. Ploughmen are paid monthly wages in about 68 per cent. of the selected villages. Elsewhere they are paid a share of the harvest produce. Their cash wages have risen in the same way as those of other labourers, and the rates do not include the value of perquisites at harvest time when the ploughman turns reaper.

General.

45. Prices are still at a high level, and the demand for labour has increased partly owing to the depletion of the ranks of unskilled labour by the ravages of plague, and partly to the industrial development of the Punjab. The results of comparing the districts of the Ambála Division with those across the Provincial border show that the Punjab rates are in all cases somewhat higher, but the correspondence is fairly close. The United Provinces rates for unskilled labour (August 1911), especially in the north-west, were rendered abnormally low by the partial failure of the autumn harvest of 1911. Outside the Ambála Division, and especially in the Central Punjab, the rates for all classes of labour are very much higher than in the United Provinces.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue.— } Report on the Land Revenue Administration of the Punjab for the agricultural year 1st October 1911 to 30th September 1912.
Revenue Surveys and Settlements.— }

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1912.

Land Records.—Report on the Operations of the Department of Land Records, Punjab, for the year ending 30th September 1912.

Waste Lands and Government Estates.—
1. Annual Report for the Chenab, Jhelum and Chunián Colonies for the year ending 30th September 1912.
2. Land Revenue Report, *as above.*

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1912.

Revenue and rent-paying classes.—Land Revenue Report, *as above.*

PUBLICATION OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I—

Area Totals—Table 1 J.
Classification of Area—Table 2 I.
Incidence of Land Revenue—Table 5 I.
Transfers of Land—Table 6 H.
Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and collections.

46. The fixed land revenue demand of the Province stood at Rs. 2,13,73,969, an increase of Rs. 47,616 only over last year's figures. Increases due to re-assessment occurred in Hissar and Ludhiána, partly counterbalanced in Hissar by the substitution of a fluctuating assessment in parts of the Fatahabad tahsil. Other additions and deductions were normal. Of the current demand, 97·2 per cent. was recovered, a remarkable result considering the extensive failure of the kharif, and due to the balance being redressed by a bumper rabi. The outstanding balance of the current demand is Rs. 5,95,391, of which Rs. 5,10,856 are under suspension and Rs. 5,465 recoverable arrears not under suspension. The irrecoverable balance is Rs. 77,919, of which Rs. 21,274 were remitted on account of calamities of season.

At the close of last year the outstanding balance was Rs. 5,79,430, of which Rs. 3,86,345 were classed as recoverable and Rs. 1,93,085 as undetermined or irrecoverable. Of these sums, in the year under report, Rs. 1,80,353 were struck off, while Rs. 2,12,050 were recovered, and Rs. 1,90,206 remain as balance. The increase in the balance of Rs. 3,179 is due to refunds.

Collections of the current demand were over 90 per cent. in all districts, except Jhelum and Shahpur. This high percentage of collections is due, as observed above, to the splendid rabi of 1913, which enabled district officers to collect a large proportion of the revenue suspended in the kharif. The suspensions of that harvest amounted to 13¾ lakhs (principally in the Delhi and Ráwalpindi divisions and in the Gurdáspur, Siálkot and Gujránwála districts of Lahore), and the suspended revenue which was collected in the rabi was

upwards of 10½ lakhs. There is reason to suppose that the tendency in allowing suspensions was to err on the side of liberality, for a scrutiny of the monthly collection statements sometimes brought to light payments considerably in excess of the demand as reduced in consequence of suspensions. In the Ráwalpindi division, for instance, revenue-payers had paid in by the end of July half a lakh more than they were required to pay, *i.e.*, about 30 per cent. of their arrears.

River action.

47. Owing to the scanty monsoon, there were fewer large floods than usual, and consequently fewer changes in the course of the big rivers. Last year 43,376 acres were removed from assessment owing to river action. This year the figure is 29,648 acres only, which corresponds almost exactly with the area newly assessed owing to alluvion during the year. The nett decrease in the fixed land revenue demand from this cause is Rs. 12,442 only.

The big rivers are again responsible for nearly all the changes, the action of chos and minor streams being comparatively unimportant. The largest loss of revenue, Rs. 5,759, is reported from Lahore, and is due entirely to the action of the Ravi. Nett increases of assessment are shewn by Gurgaon, Delhi, Jullundur, Siálkot, Gujránwála, Attock and Dera Gházi Khan.

Fluctuating Land Revenue.

Demand and collections.

48. The amount of land revenue temporarily off the fixed land revenue roll was Rs. 92,000, of which Rs. 42,000 is due to the revision of assessment in Gurdáspur. The amount of land revenue permanently off the fixed land revenue roll rose from 71 lakhs to 87 lakhs. The important increases are entirely due to re-assessment in the canal colonies, Lyallpur showing an increase of 10 lakhs, Shahpur 6 lakhs, and Jhang 1 lakh. Land revenue assessed by the Deputy Commissioner on canal-irrigated land shows decreases of Rs. 73,000 in Multán and of Rs. 12,000 in Dera Gházi Khan. In Multán the canals began to flow late and closed early. The largest decrease of irrigation is on the Lower Sutlej Series.

Supervision of demands.

49. The special examination into the general working of fluctuating assessments shows that in five districts the Settlement Officer's estimate is only now being reached, the average collections since settlement having been in all cases below it, while in two districts, Montgomery and Hissar, the estimate is still far from being attained. The latter remarkable divergences from the estimates have hardly been accounted for. In Miánwáli too the very lenient assessment imposed by Mr. Thorburn 40 years ago has not been reached by the average fluctuating assessments, though prices have risen enormously. On the whole, the results are now not unsatisfactory, and the special attention directed to the matter has shewn that these assessments require most careful watching by Collectors if Government is not to be defrauded by collusion between the subordinate revenue staff and the cultivators.

Other Land Revenue.

Demand and collections.

50. The demand which stood last year at less than 25 lakhs rose in the year under report to nearly 70 lakhs, of which 69 were collected. This enormous increase is due to the sale of proprietary rights in the Chenab colony, from which a sum of 61 lakhs was realised. There is a large uncollected balance in Delhi (Rs. 43,000), due to the failure of certain purchasers of Government land to fulfil their engagements. The large balance in Shahpur is due, as before, to the Jalpana Estate. The largest decrease is under the head "Sale of town-sites," whose receipts fell from Rs. 3,20,000 to *nil*, owing to the completion of the various colony towns. Recovery of cost of assessment from assignees fell from nearly one lakh to practically nothing. Receipts from *tirni* show a falling-off of Rs. 9,000, mainly in Montgomery, where the failure of the winter rains produced a grass famine.

MISCELLANEOUS.

Processes for the collection of land revenue.

51. Coercive processes against lambardars issued in 3,386 cases as against 4,683 last year. The amount of land revenue involved was over 8 lakhs of rupees, of which 97 per cent. was recovered. Coercive processes issued at the request of lambardars were 8,176 as against 9,589 last year. The amount involved was 2 lakhs, of which 81 per cent. was recovered. The decrease in the number of processes issued is considerable and satisfactory. Stringent measures against lambardars were found necessary in two cases in the Western Punjab, and elsewhere the policy of confiscating *pachotra* is producing a marked improvement in the punctuality of payments; but it is generally found that the issue of a warrant is sufficient to ensure payment without its execution. In Kángra the number of non-residents and in Lahore the general lawlessness of the Manjha are given as reasons for unpunctual payments to lambardars. Lambardars appear to be backward in their payments in Gujrát, Karnál, Miánwáli and Ludhiána, while they themselves are most in need of Government aid in Amritsar, Gurdáspur, Muzaffargarh, Kángra, Lahore and Miánwáli.

As usual, the processes issued were served by the tahsil chaprasis in most districts. Special establishment was, however, employed for short periods in 13 districts. The receipts from *talbana* amounted to Rs. 20,326 as against Rs. 18,485 in the previous year.

Payment of revenue through the post office.

52. Revenue-payers are rapidly appreciating the system of remitting their land revenue by money order, the amount so paid in having increased by 5½ lakhs. In view of the growth of the popularity of the system and the undoubted convenience which results to the revenue-payer, His Honour does not consider that it is necessary to attempt to obtain any reduction in the money-order fee. The system adopted in Jullundur and Ludhiána of requiring lambardars to pay their instalments in batches is convenient to the tahsil officials, but it is doubtful whether it can ever be successfully enforced, as it entails extra journeys to the tahsils for the lambardars who pay in their revenue personally.

The use of currency notes for remittance of land revenue continues in Lyallpur and Gujránwála, and has been sanctioned tentatively in Rohtak, but it gathers little favour.

11.—Professional Surveys.

Riverain party.

53. The riverain detachment of the Survey Department continued its work of laying down base lines and traversing. Squares were marked out for riverain boundaries on both banks of the Sutlej and Jhelum, and traversing was carried out for cadastral surveys on the Sutlej, Ravi, Chenab and Jhelum, 8,541 theodolite stations being fixed along the bank s of the rivers.

Settlement *masavis* for 328 villages were completed, and thirty 4-inch sheets were traced and supplied to the Settlement Officers of Hoshiárpur, Una, Ferozepore, Siálkot and Shahpur.

In addition, twenty 4-inch riverain boundary sheets were plotted and compiled, 10 sheets typed, 23 sheets completed, and 371 village maps were reduced by pantagraph to the scale of 4 inches = 1 mile.

Other work done.

54. The rectanglar survey of the area to be commanded by the Lower Bari Doab Canal was carried over the remaining tract. In all 55,000 rectangles were demarcated. Nearly 40 per cent. of the work was tested by the Naib Tahsildars, Tahsildars and the Survey Officers and 15 per cent. was checked with theodolite traverse. Four thousand seven hundred and eighty-two linear miles of traverse were run, and 13,788 theodolite stations were fixed. The whole of the demarcation was finished by December 1912.

The total expenditure on the riverain work from 1st October 1911 to 30th September 1912, excluding the pay of the *khalasis*, was Rs. 24,969, and that of the Lower Bari Doab work was Rs. 2,00,981, or annas 2·34 per acre.

The Upper Chenab rectangular survey was practically completed last year, and that on the Upper Jhelum Canal has now been finished.

The topographical survey parties surveyed 7,373 square miles on the 1-inch scale and a small portion on the 1½-inch scale in Gujránwála, Siálkot, Lahore, Amritsar, Ferozepore, Hoshiárpur and Jullundur and in Kapúrthala State. Thirty-seven 1-inch standard sheets relating to the Punjab were published during the year.

12.—Revenue Surveys and Settlements.

55. Government orders were received during the year on the final settlement reports of Karnál, Delhi and Ludhiána. Those of Hissar and Gurdáspur were sent to Government after the close of the year.

Kulu.—The records were practically complete by the end of the year, and the Settlement Officer is now winding up the settlement, which will take 3 months less than the sanctioned period, and will cost 22 per cent. less than the estimate. The sanctioned enhancements will be taken and the cost of settlement recovered in 2½ years.

Kángra.—In last year's report the difficulties experienced in the Dehra-Hamirpur settlement were noticed. In the year under report they were accentuated by the illness and eventual departure on leave of the Settlement Officer. Before he left, however, Mr. Connolly had succeeded in getting the work well under way. Additions to the staff were sanctioned, and the record work is now complete for about two-thirds of the estates concerned. Orders were passed on the preliminary report, and village inspections are well in hand. The Commissioner believes that the settlement will be completed by the end of 1913 in Una and in the course of 1914 in the other two tahsils.

Hoshiárpur.—Measurements were finished in two tahsils and assessment reports completed. In Garhshankar tahsil measurements were to be finished shortly, record work not till February 1913. The settlement should be completed by the end of 1913, and the total cost will not be more, and will probably be less, than the estimate.

Ferozepore.—Measurements were finished in Moga and nearly finished in Ferozepore. They are making good progress in Muktsar and Zíra. It was found necessary to subject the maps in Fázilka to a more complete revision than had in the forecast been anticipated to be necessary and in some estates to re-measure. The Moga assessment report was received, and that of Ferozepore was written before the close of the year, and the former has been submitted to Government.

Gurdáspur.—Assessments in the remaining tahsils—Shakargarh and Pathánkot—were announced and distributed, and the settlement concluded at the end of the year.

Amritsar.—The new maps and records have been completed in Amritsar and Tarn Táran, and the work is in full swing in Ajnála. The assessment reports for the first two tahsils were sent up and orders passed on them. Ajnála alone remains to complete the settlement.

Siálkot.—Work was in progress during the year in Daska, Raya and Pasrúr tahsils. Half of Raya and two-fifths of Daska have been re-surveyed, while *killabandi* is in progress in that part of Pasrúr which is to be irrigated by the Upper Chenab Canal. Fair progress has been made, and the Settlement Officer hopes to finish in the scheduled time. The prospect of canal irrigation involved very heavy partition work in Pasrúr.

Gujránwála.—Field work was practically finished, and assessment reports disposed of. Announcements have been delayed, as *killabandi* brought to light important changes in soil classification which involved re-casting the village assessments.

The settlement will accordingly take 3¾ years instead of 3 estimated, and cost more than half a lakh more than the estimated amount of 4 lakhs.

Shahpur.—Record work was completed in Shahpur for all the villages in the year's programme and a few more. Final attestation has not kept pace with field work, but was to be completed for these villages early in the current year. Orders were passed on Mr. Rudkin's assessment report of the Lower Jhelum Canal area and the settlement of that area concluded.

Lyallpur.—The assessment report of the Gugera Branch II circle was submitted and orders passed on it during the year. This assessment is estimated to bring in Rs. 14,71,784, an increase of 109 per cent. In the Lower Jhelum colony the re-assessment is estimated at Rs. 13,45,562, an increase of over 200 per cent. It is again to be noted that re-assessment in these colony areas costs practically nothing beyond the pay of the Settlement Officer, as no revision of records is required, while the large increases expected are fully justified by the prosperity of the tracts and by the fact that the first assessments now under revision were tentative and largely nominal.

Preparations for future operations.

56. Map correction and revision of records in preparation for the settlement were in progress in Lahore and Gujrát; two-fifths of the records being brought up to date by the abbreviated system of map correction in Lahore, and the work being completed after two years in Gujrát. The re-settlement of these districts was sanctioned during the year, and the settlements began in October and November 1912, respectively. The Jullundur forecast was dealt with during the year, and the settlement has been sanctioned by the Local Government and will begin in October 1913. A new scheme of settlement operations was prepared during the year and sanctioned by Government. Under this scheme the remaining tahsils of Kángra are due for re-settlement in 1913, but work will not be commenced till establishment is available from the Dehra-Hamírpur settlement. It is hoped, however, that with the experience there gained, and with help from the Survey Department, it will be possible to push measurements through quickly in the remaining tahsils. Simla and Montgomery are due for re-settlements in 1914, and the Simla forecast will be sent for this year. As to Montgomery, the Colonization Officer, Lower Bari Doab Canal, will probably have to undertake part at least of the settlement.

13.—Land Records.

Patwaris.

57. The number of patwaris and the areas, &c., of their charges have not changed since last year.

The only change in the scale of pay of patwaris has taken place in the Ludhiána district, where the rates were raised to Rs. 14, Rs. 12 and Rs. 10 with effect from April 1st, 1912. The patwaris of the Province submitted a petition during the year for, among other things, an increase of pay, but this was refused on the ground that Government would not be justified in raising the patwaris' pay in view of the large expenditure that would be involved, as long as men are available to do the work. It cannot be said that there is a dearth of candidates except in a few districts, and the measures recently taken to train larger numbers of men for school masters will no doubt tend directly and largely to increase the number of men from whom patwaris are selected. The total cost of the patwari establishment amounted to Rs. 46,942 more than last year, owing partly to the bonus of 15 days' pay granted on the occasion of the Delhi Darbar, and partly to the large increase in expenditure on stationery for the use of the settlement staffs, which were more numerous than usual.

Patwarkhanas.

58. In orders passed on the proposal to make more general provision for patwarkhanas it was decided to take no drastic steps in that direction.

At the same time the rules were amended so as to allow the Collector in really necessary cases to sanction the location of the patwari's family outside the circle. During the year Rs. 12,350 were spent on the construction of new patwarkhanas, chiefly in Kángra, Jhang and Miánwáli, while Rs. 2,055 were spent on repairs.

Kanungos.

59. The amalgamation of the district and settlement kanungo staffs was carried out in all districts towards the close of the year, and its working will be noticed in next year's report. It will also be considered whether the time has come when all permanent kanungos might be allowed to attest the mutations now attested by special kanungos, the latter being empowered to attest all mutations.

Records,

60. The preparation of the annual records still receives insufficient attention. The closer association, however, of other officers of the district staff, besides the Revenue Assistant, with revenue record work should alter the present state of affairs and render it possible for Collectors to arrange for the adequate check and attestation of *jamabandis*.

The experiment of associating the Director of Land Records with settlement work has proved a marked success. The new system of revision of records tried in Gujrát, Lahore and Shahpur, which is really what the late Colonel Wace aimed at in 1885-88, *viz.*, the continuous correction of the record up to date as provided in the Revenue Rules, gives every promise of success. The question of the extension of the system generally or when districts come under settlement is now being considered.

14.—Waste Lands and Government Estates.

Lands managed by Deputy Commissioners.

61. There is little to record as to the management of State lands by Deputy Commissioners during the year. The management of the rakhs in Attock is reported to be in an unsatisfactory condition. The staff is inadequate, and the rakhs are very scattered. The Deputy Commissioner is investigating the matter, which will probably come to the notice of Government during the current year. Small leases for cultivation were sanctioned in Dera Gházi Khan, Multán and Miánwáli.

The management by the Deputy Commissioner of the Shahpur Kandi forests in Gurdáspur continues satisfactory. In Dera Gházi Khan it was decided to bring all the forests under the control of the Deputy Commissioner with a Forest Ranger deputed to assist him.

The experiment introduced by Mr. Kitchin of associating non-officials with the management of *guzara* forests in Murree and Kahúta has been officially recognized by Government, and revised rules were sent up during the year, and were notified shortly after its close. The system appears to be working well, though the Deputy Commissioner reports that one of the three non-officials appointed is in arrears with his work.

Very large remissions in the *tirni* demand of Montgomery were necessitated by the failure of the rains, which produced a fodder famine. There was no grass in the Bar, and the Government rakhs which normally support large herds were deserted.

Lower Chenab colony.

62. The allotted area shows a decrease of 3,582 acres, due to confiscations of mule-breeding grants in Lyallpur and Gujránwála. These will be re-allotted in due course. The small balance of unallotted land will be sold for full market value, now that the villages have been established.

The area sown was 9,000 acres more than last year, bringing the total cultivation up from 103 to 104 per cent. of the allotted area. Remissions were granted on 4·3 per cent. only of this large area, and the practical result is that the colonists have matured cent. per cent. of the total area allotted to them. The abolition of holding-to-holding *kharaba* has reduced the area on which remissions were granted by less than 1 per cent., and has not led to greater economy of water, as was hoped. The fact that the water-level

is rising a foot a year in Lyallpur supports Government's view that measures should be taken in the interests of the colonists themselves to reduce over-irrigation. However, it is too early yet to gauge the full effects of the abolition of holding-to-holding *kharaba*.

The future of the Camel Corps was still under the consideration of the Government of India. *Surra* has been markedly diminished by transporting the Corps across the Ravi during the rains. Revised rules for mule-breeding grants have recently been sanctioned which permit of their being held by grantees who are not lambardars. Horse-breeding is entirely voluntary and is making great progress.

It has been decided, in view of the multiplication of trees throughout the colony and the consequent disappearance of the conditions which called for the artificial stimulation of arboriculture, to reduce the number of village plantations originally established as nurseries by selling those at a distance from the village-site and retaining only such as serve a useful purpose. At the same time the cultivation *killas* attached to these plantations were added to the lambardari grants free of service conditions, thus enhancing the emoluments of headmen by providing them with *ex-officio* cultivation grants of about 2½ acres each. The Deputy Commissioner of Gujránwála reports that this measure is very popular. The scheme of reward grants-in-aid for sanitation was abolished with the surrender by Government of the ground-rent income in consideration of which such grants were made.

The re-assessment of Gugera Branch II circle was completed during the year, and the result was an enhancement of 109 per cent. as compared with the previous provisional demand. A lower schedule of occupiers' rates was sanctioned by the Government of India for inferior villages, and a list of these villages was prepared by the revenue and canal authorities in consultation. The enormous value of fodder crops in secure areas was brought to the notice of Government by the Financial Commissioner in reviewing this assessment report. Subsequently the shortage of fodder in other parts of the Punjab enabled the Chenab colonists to swell their incomes even more by exporting large quantities of *bhusa* to Montgomery and other affected districts. The re-assessment of the Rakh Branch is nearing completion, after which will remain the re-assessment of the areas on the "Extensions" and of some 58 villages on the Montgomery border.

With hardly any exceptions, the towns of this colony are growing and prosperous: none of them, however, are as yet self-supporting. Modern systems of drainage and water-supply are expensive to construct and maintain, and it is undesirable to withdraw at too early a period the fostering aid of Government. There can be no doubt, however, that the grain-merchants and middlemen are not taxed sufficiently for the amenities they enjoy.

The Colonies Act (V of 1912) became law on June 28th, 1912. It is reported to have been well received in the colony. It provides, among other things, for exchanges of tenants' holdings only, so that the acquisition of proprietary rights will afford relief to the local officers whose time had recently been excessively occupied in dealing with exchanges of land. All but 7 per cent. of the yeomen and capitalist grantees have either completed or paid instalments towards the acquisition of proprietary rights in their holdings. The peasant grantees are also freely availing themselves of the concession, and paid in some fifty-nine lakhs of rupees during the year. Widows have not been allowed to purchase.

63. The allotted area now totals 436,159 acres. Some years ago it was estimated that the limit had been reached when 375,000 acres had been allotted; and it seems possible that the poor soil remaining may yet be worked at a Jhelum Canal colony.

profit. Of the allotted area 87 per cent. was cultivated and remissions were allowed up to 10 per cent. of the sown area, mostly in kharif. It seems likely that still further improvements in the distribution of water will be effected, and unless the opening of the Upper Jhelum Canal causes a set-back, a yearly enhancement in the percentage of crops matured, as on the Lower Chenab, may be looked for.

The passing of the Colonies Act had had little effect in this colony. The concession to widows of sonless grantees which was introduced last year is said to have caused some trouble. There is no revival of the fictitious agitation against primogeniture, and it is significant that horse-breeding conditions are more faithfully observed by colonists of the peasant type than by grantees of large areas. On the Lower Chenab Canal, too, it was the wealthy lambardars whose shortcomings in the matter of mule-breeding led to confiscation of grants.

Mr. Rudkin's assessment report was disposed of during the year and the new assessments put into force. The result of resettlement is an increase approximately of 208 per cent., which was amply justified by the prosperity of the colonists and the circumstance that the superseded assessment was merely an initial tentative one. It was inevitable that there should be appeals against the assessment, but only 8 appeals have reached the Financial Commissioner. Of these six have been rejected and two are pending. In this colony also a lower schedule of occupiers' rates has been sanctioned for inferior villages.

Occupancy rights have now been given to all horse-breeding peasants who are entitled to them. Apparently the Jhelum colonists are perfectly satisfied with this tenure, and no petitions for proprietary right have been received in consequence of the concession made in this behalf to the Chenab colony.

Towns in the Jhelum colony are prospering, though their rate of progress is naturally slower than in the larger colony on the Chenab. The question of maintaining these towns presents the same difficulties as in Lyallpur.

Tree-planting is said to be at a standstill for want of funds, which will be more plentiful under the new assessment. The experiment of controlled horse-breeding in the Jhelum colony is from a Remount Department point of view a conspicuous success.

Chunian colony.

64. Small grants totalling 493 acres were made during the year, bringing the allotted area up to 80,664 acres. The area remaining for allotment is only some 1,700 acres, most of which will be absorbed by the military reward grants sanctioned last year. Of the area permanently allotted, all except 1,000 acres was sown during the year; 8 per cent. failed owing to scanty rainfall and imperfect canal supply. Outstanding arrears are insignificant. Very few tenants in this colony have completed the residence of 15 years requisite as a condition for the purchase of proprietary rights.

15.—Wards' Estates.

Number and value of estates.

65. The Court of Wards had under its superintendence 53 estates, the total assets of which amounted to over Rs. 416 lakhs. The area controlled and the value of the landed property are somewhat smaller than in the preceding year, but on the other hand the value of the house property is higher. Six estates have an income of over a lakh, and four of over half a lakh.

Results.

66. Four estates were released from superintendence, all in flourishing condition. The excess of assets over liabilities for all estates still continues.

Methods.

67. Improvements in the estates themselves are progressing, along with investment of the cash balances in real estate. Horse-breeding is successful at Mamdot and Kot Fatteh Khan, and sheep-breeding at Mamdot and Kot. Considerable attention is being paid to tree-planting and horticulture. Fourteen wards attended the Aitchison College during the year.

68. The audit reports furnished by the Examiner of Local Fund Accounts have been of the utmost value. In some cases glaring defects of management have been brought to light, the Public Works Department of the Mamdot Estate being a conspicuous instance. Audits.

16.—Revenue and Rent-paying Classes.

69. The total number of villages in the Province is ten more than last year, owing principally to the formation of new estates in Lyallpur and Gujránwála. The total number of landowners and share-holders is 3,622,082, an increase of 33,368 since last year, and the number of holdings has increased from 3,082,348 to 3,135,472. The figures suggest that subdivision of holdings is once more becoming a feature of life in the rural Punjab, perhaps owing to the diminution of plague. The average size of a holding is 12 acres, of which 8 are cultivated. Last year it was reported that of the total area held in proprietary right, one-sixth was owned by persons who are not members of notified agricultural tribes. This year the fraction is nearer one-seventh. The cultivated area under mortgage has risen only from 12 to 13 per cent. of the total cultivated area. The heaviest percentage of cultivation under mortgage is, as last year, in Siálkot and Gurdáspur, and the lightest in Ráwalpindi, Montgomery and Attock. It is quite logical that the two former districts are to the fore in the matter of agricultural banks, while the three latter are near the bottom of the list. An interesting development is reported from Hoshiárpur. Mortgagees are commonly permitting part of the mortgaged area to be redeemed without any payment being made, the reason being that they are afraid that if they refuse, the mortgagor will redeem the whole area and remortgage a part of it elsewhere on better terms. General.

70. Further luminous illustrations of the growing value of land are afforded by the transfer statistics. The number of sales was greater than in any year since 1900-01, and the area sold exceeded the quinquennial average by 13 per cent. The sale price dropped from Rs. 124 to Rs. 119 per acre of cultivation, but the price was higher than the quinquennial average by Rs. 9 per acre. The drop in sale price reflects the poorness of the kharif crop, better than the mortgage price, which rose from Rs. 101 last year to Rs. 106. The variations in the multiple of the land revenue are extraordinary, and if the causes of the differences from year to year and district to district could be explained, the information so obtained would be most valuable. Transfers of land.

71. The additions made to the list of notified tribes were mostly of tribes who were omitted on account of numerical insignificance or difficulty of grouping and very few applications were unsuccessful. Endeavours are made by those who are not notified and see no prospect of being so, to alter their tribal designation: these attempts rarely succeed. District officers are fully alive to the necessity of watching carefully for attempts to evade the Act, and it is very doubtful whether non-agriculturists will ever acquire by means of such transactions any permanent interest in agricultural land. Land Alienation Act

Agricultural tribes have the great bulk of the mortgages and redemptions entirely in their hands, that is to say, they took three-quarters of the mortgages, four-fifths of the sales, and carried out nearly five-sevenths of the redemptions. The sale figures show more clearly than the mortgages how the agriculturists have gained, and it is reported from one district that money-lenders are relinquishing such pieces of land as they hold, as well as giving up the attempt to acquire land.

Rent-paying Classes.

72. The proportion of cultivated land held by tenants paying rent is 53 per cent. against 47 per cent. held by owners, Government colonists, and rent-free tenants. Occupancy tenants are in possession of 9 per cent. of the total cultivated area, and 44 per cent. is held by tenants-at-will. Nearly 88 per cent. of the land held in occupancy tenancy pays cash rents. Tenants-at-will, however, pay rent in kind on 72 per cent. of the area held by them. The figures corresponding to these in the previous quinquennial return were 79 and 69, the increases being probably due more to a different system of classification than to any change in the customs of the Province. Occupancy tenants and tenants-at-will.

Enhancement of rent of occupancy tenants.

73. Suits against occupancy tenants for enhancement of rent show a decrease from 1,813 to 1,666. In 1,314 cases enhancements were decreed. The most notable decrease is in Hissar, where only 87 cases were instituted as compared with 708 in the preceding year,—an abnormally large number,—due to the announcement of the new assessment. Institutions were heavy in Hoshiárpur (479), Jullundur (466) and Gurdáspur (255). In Hoshiárpur and Jullundur the Commissioner attributes the activity of landlords in this behalf partly to the settlements which are in progress in one district and in prospect in the other, but partly also to the general rise in agricultural values. In Hoshiárpur Mr. Fagan adds that occupancy status is generally disputed. The Deputy Commissioners of Rohtak, Lahore and Jhang notice the strong position of tenants in general, which is largely due to plague and partly to the extension of irrigation. From Attock it is reported that landlords in the Chhach are discontented with the low rents paid by their occupancy tenants. In one case a landlord who sued was found to be paying more to Government for land revenue and cesses than he received as rent. The expense of litigation apparently deters these landlords from bringing suits for enhancement in considerable numbers.

Ejectment of tenants-at-will.

74. Applications to eject tenants-at-will have fallen from 11,293 to 10,145, ejectments ordered from 6,270 to 5,974, and ejectments actually made from 5,251 to 4,404. A noticeable decrease in actual ejectments—948 to 597—is in Hissar, where the Deputy Commissioner attributes it to the conclusion of settlement. In Delhi applications fell from 918 to 543, probably owing to the same cause. Large increases in notices issued are reported from Hoshiárpur, where the Commissioner observes that ejectment proceedings will naturally tend to increase, as proprietary holdings are small and the pressure of population on cultivated area grows more and more acute in spite of plague. Applications increased in Ferozepore, principally in the Fázilka tahsil, and here the Deputy Commissioner attributes the litigation to a desire on the part of landlords to prevent their tenants obtaining a higher status by long and undisputed possession. In Lahore notices rose from 1,005 to 1,919 owing to the impending settlement. In Montgomery and Jullundur tenants are said to be hard to find. In Dera Gházi Khan 610 notices resulted in only 14 ejectments. The Deputy Commissioner observes that in most cases these notices are issued to recover rent in the cheapest manner.

Suits by tenants to contest their liability to ejectment resulted in the tenants' favour in 661 cases as against 977 last year.

Miscellaneous.

Descent of Jagirs Act.

75. Nine jagirs were notified during the year under Punjab Act IV of 1900—1 in the Kángra district and 8 in the Lahore district. The declarations of a rule of integral descent were based on written documents. The approximate value of the jagirs thus notified was Rs. 12,450. Progress is being made, but out of a total of 29½ lakhs assigned, jagirs amounting to 8 lakhs only have yet come under the Act.

Land Acquisition Act.

76. The large area, 17,698 acres, acquired for public purposes marks the expansion of Railway and Irrigation works and includes land required for new Delhi. The figures showing the number of years' purchase of the land revenue represented by the price of the land acquired go to confirm the remarks made in last year's report regarding the increasing value of agricultural land in the Punjab and the enormous prices paid for urban and suburban sites.

Land Preservation (Chos) Act.

77. The stone bunds erected in the Hoshiárpur district have been found to be unable to withstand the terrific force of the torrents in flood, and action on a larger scale is necessary in that district and in Ambála. The co-operation of the Patiála and Nálágarh Darbars has been invited, and Government has agreed to the appointment of Mr. Holland, I.F.S., to be in charge of reboisement operations in the Siwáliks.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1912.

(2) Report on the working of the Criminal Tribes Act for the year 1912.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1912.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1912.

Prisons.—Report on the Administration of the Jails in the Punjab, 1912.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1912.

Registration.—Note on the Registration Returns of the Punjab for the year 1912.

Legal affairs of Government.—Report on the administration of the legal affairs of the Government of the Punjab for the year 1912.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1912-13.

Municipal Administration.—Report on the working of municipalities in the Punjab during the year 1912-13.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part VI.—Administrative and Judicial.

Part VIII—Local Funds.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

17.—Legislating Authority.

The Administration Report for the year 1911-12 gives under this section a detailed account of the history and powers of the Legislative Council.

The constitution of the Council was amended by Government of India notification No 51 (Legislative), dated 5th October 1912. The number of elected members was increased from 5 to 8, three seats being filled by election by the District Boards. The number of nominated members was reduced from 19 to 16. A few minor changes were introduced into the regulations, but do not call for comment.

78. During the year 9 official and 7 non-official members were nominated, the former consisting of the Hon'ble Messrs. Diack, Fenton, Fagan, Barron, Tollinton, Mant, Godley, Gracey and Sir H. P. Burt, and the latter of the Hon'ble Sir A. M. Ker, Khan Bahadur Mian Muhammad Shafi, Khan Bahadur Khwaja Yusaf Shah, Nawab Ibrahim Ali Khan, Nawab Sir Bahram Khan, Sardar Daljit Singh and Sardar Bahadur Sardar Sundar Singh, Majithia. The Hon'ble Messrs. Meredith and Scratchley resigned their seats on retirement. Changes among members.

The following members were elected:—The Hon'ble Rai Bahadur Shadi Lal (University), Mr. J. Currie (Chamber of Commerce, Delhi), Lala Kashi Ram of Ferozepore, Rai Bahadur Ram Saran Das of Lahore, Rai Bahadur Hari Chand of Multán, by the Cis-Sutlej, Central and Western groups of municipalities respectively; and Babu Gajjan Singh of Ludhiána, Rai Bahadur Bakhshi Sohan Lal of Lahore and Malik Muhammad Amin Khan of Shamsábad (Attock) by the corresponding groups of District Boards, respectively.

18.—Course of Legislation.

Business transacted.

79. Five meetings of the Legislative Council were held,—four in Lahore and one at Simla.

Four fresh Bills were introduced in Council, all of which were passed.

The Colonization of Government Lands (Punjab) Bill pending since 1910 was taken up and made law.

The Acts passed which became law during the year were—

(1) IV of 1912, the Punjab Courts (Amendment) Act Amending Act.

(2) V of 1912, the Colonization of Government Lands Punjab Act.

(3) VI of 1912, the Punjab Panchayat Act.

(4) I of 1913, the Punjab Pre-emption Act.

(5) II of 1913, the Redemption of Mortgages Act.

(6) III of 1913, the Punjab Forests (Sale of Timber) Act.

One hundred and eight questions were put and answered, and one was withdrawn. One Resolution was moved and passed, and one was withdrawn.

Indian Acts.

80. The Acts of the Imperial Legislative Council more particularly affecting the province passed during the year are—

(1) The Wild Birds and Animals' Protection Act (VIII of 1912),

(2) The Indian Divorce Amendment Act (X of 1912),

(3) The Local Authorities Emergency Loans Amendment Act (XI of 1912),

(4) The Motor Vehicles International Circulation Act (XII of 1912),

(5) The Delhi Laws Act (XIII of 1912),

(6) The Indian Extradition Amendment Act (I of 1913),

(7) The Official Trustees Act (II of 1913),

(8) The Administrator-General Act (III of 1913),

(9) The White Phosphorus Matches Prohibition Act (V of 1913),

(10) The Mussalman Waqf Validating Act (VI of 1913),

(11) The Indian Companies Act (VII of 1913), and

(12) The Indian Criminal Law Amendment Act (VIII of 1913).

19.—Police.

General Police Force.

Crime in general.

81. The wave of crime, which has been steadily growing during the last decade, rose still higher in 1912, and the increase on the figures of 1911—itself a record year—was no less than 13·5 per cent. The mass of the

people in the northern districts display a hostile or lukewarm attitude and a desire to hamper rather than assist the police. The dacoities that have occurred in the Ráwalpindi Division of late years have been the work largely of well-to-do men, and the lambardars and other prominent men must have been well aware, in the majority of cases, of their misdeeds. Government has very plainly signified its determination to put a stop to these practices.

The position, as stated in the Police Report for the year, is that, in comparison with the figures for the six years ending 1910, murders and attempted murders show a rise of 25 per cent. and homicides of 19 per cent., while the increase in cases of grievous hurt is 30 per cent., in thefts 16 per cent., in burglaries 40 per cent., and in dacoities no less than 240 per cent. At the same time the percentage of convictions to cases reported has declined from 33 to 28, while out of every 100 cases sent up for trial only 66, instead of 70, resulted in conviction. It is true that station officers are no longer judged by their percentage of convictions, and more crime is brought to light by the better methods of to-day, but there has at the same time been a real increase in crime, due mainly to that disregard of every kind of authority which nowadays is a familiar spectacle in every Oriental country.

Violent crime.

82. Murders were 8·4 per cent. more rife than in 1911 and 30 per cent. more so than in 1905. In two out of every five cases the immediate cause is ascribed to the relation between the sexes,—a fact which is being aggravated yearly by the increasing disparity of the female as compared with the male population.

Dacoities increased by 15 per cent. on last year's figure, and were over four times as many as in 1905. This form of crime seems to occur in waves, and can be dealt with, as in 1899-1900, by special measures. Large gangs were captured during the year and several notable dacoits with modern arms in their hands were arrested very pluckily by Messrs. Bennett and Toms, Assistant Superintendents of Police, the latter of whom received the thanks of Government and the King's Police Medal. The Biluch Levy at Vihoa kept the district of Dera Gházi Khan immune from trans-border raids, but two gangs penetrated into Shahpur and Miánwáli, only to be captured and punished. Robberies were committed chiefly by wandering tribes in the Eastern Range, and, there is reason to believe, by Gurkhas at Dharmsála, whereby the people of that place were for a time in a state of terror. The villagers of Gah in Jhelum beat off a large body of dacoits and were rewarded by the remission of their kharif revenue.

Burglaries and thefts.

83. The scarcity of fodder acted as a check on cattle-stealing and diverted the attention of cattle-thieves to burglary and other offences. Burglaries in 1912 exceeded those of 1905 by 56 per cent. Boat-patrolling of the Indus has been taken up by Government, and some Rs. 6,000 were spent with excellent results.

Other offences.

84. True cases of coining increased by 6½ per cent. on last year and rioting by 21 per cent. A serious feature is the number of assaults on public servants discharging their duty, especially on police officers. There has been a striking rise of 75 per cent. in cases of cheating in the last seven years. This must be taken as one of the results of the spread of education. Cheating is frequently connected with the traffic in women, which is considerably more extensive than is commonly supposed.

Magistrates and crime.

85. There appears to be a growing tendency among Magistrates to overlook the administrative side of their duties, and in the exercise of their judicial functions to rely too much on abstract principles of law and procedure divorced from knowledge of, or sympathy with, the people, for whose protection the law was established. Many cases too shew lamentable disregard of responsibility on the part of Magistrates, intolerable delays, needless adjournments on the most frivolous pretexts—all tending to handicap the prosecution and discourage the

witnesses who have the public spirit to come forward—and, not infrequently, in the event of conviction very inadequate punishment, which emboldens the criminal. The remedy for all this is a more thorough scrutiny and stricter control of the Subordinate Magistrates by the higher tribunals, and above all by the District Magistrates.

There is a general consensus of opinion that Honorary Magistrates have fully justified their existence, and their value as a link between the administration and the people is fully recognised by Government, who are prepared to add to their strength, both in numbers and in powers.

Patrolling.

86. The system of checking patrolling in cities and towns by means of clocks has again given satisfaction and is useful. Rural patrolling is more extensively practised in the Eastern than in the other ranges and has produced excellent results there.

Detection.

87. The Criminal Investigation Department succeeded in bringing to justice a concern in Miánwáli which had committed extensive frauds on the public, and was associated with the local police in stamping out an epidemic of dacoity in Ráwalpindi.

Railway Police.

88. Sixty-four miles were added to the line policed by the Punjab Government. Thefts from running goods trains increased, and such offences are not easy to localise owing to indifferent checking of seals. The patrolling system was improved during the year, and suspicious characters more efficiently watched.

Finger Print Bureau.

89. The work of the Bureau again increased. Search references increased by 3,500 owing to the better understanding of their importance. The percentage of successful traces was the same as last year. Expert evidence was given in 945 cases, an increase of 136 cases over the number in 1911. Written opinions were supplied in 810 cases compared with 692 in 1911. Fees increased by Rs. 1,074.

Inspector-General.

90. Sir Edward French submitted his last report after 4 years as Inspector-General and 35 in the Police force. The Lieutenant-Governor, in his review of the report, expressed his appreciation of the sterling work he had accomplished during his long service in the Punjab and of his vigorous administration of the force during a period of transition and difficulty.

Rewards.

91. The King's Police Medal was granted to eight members of various ranks of the force up to that of Superintendent. Inspector Malik Sher Bahadur Khan was given the title of Khan Sahib. Rupees 17,801 and Rs. 19,111 were paid out of the police grant in reward to members of the force and the public.

Chemical Examiner.

92. The work of the Chemical Examiner continues to grow steadily. The number of articles examined increased from 5,124 in 1911 to 9,101 in 1912, but no less than 3,402 of these were samples of cocaine tested for purity and quality, in itself a disturbing indication of the extensive growth of cocaine smuggling.

The use of arsenic in human poisoning cases has shewn some decrease as compared with last year, while opium has increased. Arsenic and opium, separately or together, account for 71·5 per cent. of all the cases of human poisoning. In cattle-poisoning arsenic continues to be the principal agent. There were 14 cases of needle-poisoning.

The percentage of detection in medico-legal cases is slightly less than last year, but has risen again in human fatal cases. It is satisfactory to note that there are no complaints against the manner in which cases have been

submitted for examination. The revision of the rules for the submission of medico-legal cases has been carried out by Major Black, and it is hoped that there will be a further decrease in the number of incomplete references.

The appointment of another Assistant Surgeon to the Chemical Laboratory has been sanctioned on the application of the Chemical Examiner.

Rural Police.

93. Punishments for failure to assist the police and for neglect of duty on the part of the zaildars, headmen and village watchmen decreased considerably since 1911. The rewards paid at the same time increased from Rs. 13,576 to Rs. 19,111. The remarks in last year's Administration Report regarding the inadequacy of the pay of village watchmen and their general inefficiency still hold good.

Criminal Tribes.

94. The encouraging account given in last year's report of the progress made in dealing with the criminal tribes might be repeated this year with emphasis. The numbers of persons on the registers have indeed gone up by 438 to 21,215, and of those non-exempted by 644, while the exempted have decreased by 206; yet there is recorded, in a year remarkable for a high tide of crime, a decrease of 62 in the number of convictions, of 59 in absentees, and of 28 in prisoners at the end of the year. The percentage of convictions to registered persons has gone down in the case of every tribe except four of the smallest. The following table compares the percentages of the total number registered and of the total convictions debited to the principal tribes, and shows which tribes are more criminal in proportion to their numbers: it will be seen that the two larger tribes are in a much less criminal state than the smaller ones:— General.

	Percentages	
	of total registered.	*of total convictions.*
Baurias	32	23
Sansis	40	45
Bilochis	2	3
Tagus	1	3
Harnis	8	7
Pakhiwaras	7	16
Bhats	·9	7
Bars and Tharanas	1	5
Nur Mahrams and Akla Hayat Bilochis ...	2	6

The Baurias show steady improvement and are used as trackers and temporary watchmen in Ferozepore. The Sansis generally are inclined to reform, but are much addicted to petty thefts from standing crops. During the year 34 of them joined the Salvation Army School at Chawa and are doing good work. The Sansi Kanjars are incorrigible and the Bilochis of Karnál show no improvement: those in Ambála are said to commit crime across the provincial border. Six Harnis of Ludhiána have been enrolled as constables as an experiment. The tribe has behaved well in the Central Range. The Pakhiwaras live mostly in Siálkot and gave no trouble except those at Kot Mokhal, where there is a Salvation Army School. Their absentees have increased largely, and the tribe is notorious throughout the province. The Bhats of Siálkot and the Nur Mahram Bilochis in Jhang are considered incorrigible. The latter tribe own land and have their own lambardars, and are particularly skilful in evading conviction. The Commissioner of Multán thinks that the Salvation Army might be successful with them. The Bars and Tharanas of Lyallpur resisted a police raid and had to be fired on; two-thirds of them have been removed to the Ravi.

Work of the Salvation Army.

95. A feature of the year's administration has been the marked success which has attended the operations of the Salvation Army. The tribes take to industrial work which is provided by the Salvation Army in preference to hard manual toil, and also feel a greater sympathy of treatment. A committee has now been appointed to examine the question of the administration of the criminal tribes in all its bearings, with special reference to the further development of co-operation with the Salvation Army, whose work has been restricted owing to their having no official or legal status.

20.—Criminal Justice.

General review of offences.

96. The remarks on the Police Report above will shew the general trend of crime during the year. The record figures for 1911 have been exceeded this year in spite of the removal of Delhi Province from the Punjab on the 1st October. The number of offences reported in 1912 was 223,612, true cases amounted to 143,122, and 128,590 cases and 299,243 persons were brought to trial. The increase in true cases is equally divided between offences under the Indian Penal Code and those under Local and Special Acts. Lahore District again heads the list with the largest number of cases brought to trial under all Acts.

Summary dismissals amount to 31 per cent. of reported offences, compromises to 30 per cent. of cases, and persons convicted to 22 per cent. only of those brought to trial.

Classification of offences.

97. Government is taking serious notice of the suggestions put forward in many quarters for the compulsory registration of marriages and the punishment of women in cases of offences against marriage laws, in order to reduce the volume of such offences. The remarks on the working of the police have dealt with the various forms of crime.

Local and Special Laws.

98. The increase in trials under Local and Special Acts amounts to about 2,000 for the Province. The punishments provided by the Excise Act for cocaine smuggling are proving insufficient to stop the traffic. The Cruelty to Animals Act was again successfully worked on the Murree and Dalhousie roads.

Miscellaneous proceedings under the Criminal Procedure Code.

99. False and vexatious applications for action under section 107 appear to be as numerous as ever. Government is contemplating various alterations of the law relating to this section so as to make such applications more difficult and punishable under section 250 of the Code, and at the same time to render the section itself at once applicable provisionally to all the parties.

Disposal of cases.

100. The disposal of criminal cases was nearly 8,000 in excess of last year's total. Honorary Magistrates and Sessions Judges have done good work towards this increase. District Magistrates continue to dispose of an insufficient number of section 30 cases. The number of appeals and revisions pending in the Chief Court is higher than it has been for some years.

Witnesses.

101. Witnesses are frequently discouraged by the long duration of cases due to unnecessary adjournments. The question of increasing their diet-money is under consideration.

Jirgas.

102. The jirga system is popular and working well in the three districts to which it applies. Under the leadership of the Hon'ble Nawab Sir Bahram Khan, the joint jirga at Fort Munro achieved some notable results in deciding inter-tribal feuds.

21.—Prisons.

Institutions.

103. The changes contemplated in last year's report have been carried out. The District Jail at Lahore was declared a first class Central Jail, and designated the Borstal Central Jail. District Jails at Rohtak and Jhang were

in consequence reduced to subsidiaries. The Delhi Jail was transferred to the Government of India. Camps were formed at new Dera Gházi Khan and Multán: the latter was owing to the great rise in the number of convicts.

The Borstal Central Jail is nearly completed, and subsidiary jails are being built at Dera Gházi Khan, Dharmsála and Amritsar. The accommodation for long-term prisoners is still insufficient.

Admissions.

104. The number of convicts admitted to prison has risen from 16,607 last year to 18,669. It has actually decreased in Miánwáli, where the Frontier Crimes Regulations are in force, but has increased 100 per cent. in Shahpur, where the duration of cases is longer than in most districts. The daily average jail population was 12,770 (against 12,450 last year), and of these 12,553 were males and 217 females. Civil prisoners numbered 44, and under-trials 1,625, the remainder being convicts.

Releases on appeal.

105. The percentage of prisoners released on appeal was 26, higher, that is, than in any previous year. Further investigation is necessary into the fact that the Punjab percentage is higher than those of other Provinces.

Classification.

106. The proportion of criminals furnished by the main religious denominations varies but little from year to year, but the number of Europeans sentenced shows a decided tendency to increase—39 this year against 27 in 1911. The bulk of these are soldiers who have openly committed thefts in order to obtain military discharge. 80 per cent. of the convicts were sentenced to less than a year's imprisonment; solitary confinement combined with rigorous imprisonment is a prominent feature of the administration of justice; sentence of death was passed on 146 persons against 118 in the previous year. The proportion of habitual criminals has fallen from the usual 13 per cent. to 11, and it appears that the decrease is at least connected with the work of the Salvation Army among the Pakhiwaras of Siálkot.

Under-trials.

107. The average period of detention rose from 23 to 25 days; the percentage of acquittals from 55·6 to 59. These figures taken along with the totals of releases on appeal are again seriously commented on.

Discipline.

108. Nine prisoners managed to get away during the year, of whom 6 were re-captured, along with 3 of the escapes of previous years. Three escapes only occurred from inside jails, and the six extramural runaways were only short-term prisoners. The night-guarding continues to be most effective. Peculiar conditions in two jails were responsible for the increased use of fetters as a measure of security from 128 cases last year to 310. The improvement in the conduct of prisoners generally which was noticed last year has been well maintained, the punishments decreasing from 34,380 in 1911 to 33,724. No less than 24,519 convicts had not even a mark against them. The improvement in the management is largely to be credited with this satisfactory result. Out of a daily average of 1,325 convict officers only one has really betrayed his trust, and monthly stipends to convict officers have been sanctioned by Government. The jail staff have risen to the increased work and responsibility demanded from them, and punishments are rare, both the superior and inferior grades being in an extremely healthy state.

Remissions and rewards.

109. Remission continues to form the chief incentive on the higher plane to good conduct and industry. The system is very popular with the convicts, who are increasingly found to prefer remission to money rewards. Only Rs. 102 was distributed as gratuities against Rs. 447 in the previous year.

Financial.

110. The total expenditure on guarding and maintenance was Rs. 10,22,385, an increase of Rs. 85,443 on last year; on the daily average strength, the cost per head was Rs. 80-14-3 against Rs. 76-0-6. The cost of

establishment rose by nearly Rs. 9,000 owing to the award of extra pay on the occasion of the King Emperor's visit and the reorganisation of the Borstal Central Jail. Expenses on dieting increased from Rs. 24-3-0 per head to Rs. 27-11-7, owing to the rise in prices of food-stuffs, in spite of which the Punjab prisoner is fed for Rs. 2-5-0 per mensem.

Jail Industries.

111. The daily average number of convicts sentenced to labour rose a little to 10,992 from 10,881 in 1911. 44 per cent. of the convicts are available for the factories and to meet the demands of maintenance (excluding those employed on lands). Over a lakh of rupees worth of produce was raised from jail lands, and in factories the profits increased from Rs. 2,23,378 to Rs. 2,74,115. The excavation work on the Lower Bari Doab Canal was completed after three years' hard work, on which 400 prisoners were daily employed. There was a clear profit of over half a lakh, and Jailor Khair-ud-din received the title of Khan Sahib for the unflagging energy he displayed. The paper factory yielded a profit of ⅓ of a lakh, lithographic printing Rs. 45,000, *Chicks* Rs. 23,543, oil-pressing Rs. 9,958, weaving Rs. 52,314. The net cost per prisoner, in spite of the higher earnings by Rs. 3-8-0 per prisoner, was Rs. 59-4-0 against Rs. 57-14-0 in 1911, which is entirely due to the rise in prices of food. The Central Jail at Lahore kept each prisoner on Rs. 24-8-0, whereas he cost Rs. 196-6-0 in Dera Gházi Khan, where supplies were expensive.

Accommodation.

112. The total accommodation available during the year was for 14,132 prisoners, or a decrease of 338, owing to the demolition by the Indus of the Dera Gházi Khan Jail. This number overlaps the daily average of 12,658, but the latter have to be classified and long-termed prisoners are increasing, so that serious overcrowding occurred in 14 jails. Accommodation for 1,240 will be added during the year, and the effect of this will be watched. A camp for 300 was opened as a temporary measure only at Multán. "Overcrowding" in the jail sense of the term only means overcrowding of the site, not of the buildings: 50 square yards of site area per head is regarded as a safe density, and actually 119 square yards were given as a minimum during the year. Over 4 lakhs were spent on buildings.

Health.

113. The total admissions to hospital declined by 123 to 7,641, the daily average from 401 to 353, and the mortality rate from 26·42 to 18·88. The year was a healthy one, and practically no malaria raged in the autumn. There was no cholera; dysentery slightly increased, and may perhaps be reduced by a different latrine system; cases of malaria also increased, but there was only one death; tubercle decreased by 79 cases and 14 deaths. Government has sanctioned in each Central Jail the appointment of a specially trained Sub-Assistant Surgeon, a general review of the ventilation problem by the Sanitary Commissioner and Engineer, and the construction of a special tubercular jail. There were 50 fewer cases of pneumonia, but a higher case mortality, and here too better ventilation and a drier atmosphere secured in sleeping quarters would probably reduce the incidence of this disease.

Juvenile adults.

114. Eight hundred young men from 16 to 22 years of age are receiving special attention in the Borstal Central Jail. Industry is taught under specially advantageous conditions, with the advice of the President and Vice-President of the Mayo School of Art; physical culture consists of games, drill and exercises. The Amritsar Temperance and the Released Prisoners' Aid Societies have been called in to teach morality and formation of character, the latter society having been formed this year under the auspices of the Salvation Army, which is doing such good work among the criminal tribes of the Punjab. Religious teachers have also been provided for Christians, Muhammadans and Hindus, and the Sikhs are being approached for a priest.

Management.

115. The past five years have been a period of strenuous and continuous prison reform in all branches. The worst defects have been eliminated, and a serious attempt has been made to reclaim prisoners to a higher and saner

view of life. Sir Louis Dane has recorded his appreciation of the work of Lieutenant-Colonel Braide and the jail staff under him in bringing about such satisfactory results.

22.—Civil Justice.

Institutions.

116. In spite of the hopes expressed in last year's report that the decline of litigation might prove to be of a permanent character, and in spite of the removal of Delhi from the Province on 1st October 1912, the number of suits instituted has exceeded that of any year since 1904, with the exception of 1909, and is 17,684 in excess of last year's figures, having risen by 17,684 from 182,182 in 1911 to 199,866. An increase has taken place in practically every district. Suits for money or moveable property totalled 165,842 in 1912 against 152,074 in 1911 while suits for title and other suits numbered 34,024 against 30,108. The reasons for the rise and fall of civil litigation have been variously explained, as in previous years. It is difficult, however, in view of conflicting opinions, to attribute the present increase to any particular cause. It may be noted that nearly 50 per cent. of the suits instituted were below Rs. 50 in value, and it would clearly be a great relief to the courts and the parties if some method more simple, speedy and inexpensive than the cumbrous machinery of the courts were devised for the disposal of this great mass of petty litigation. With this object the Civil Panchayats Act has been passed, and the rules for working it have been framed and issued. The Act is being tentatively introduced in selected districts, and its working will be carefully watched and encouraged. Muzaffargarh has now become the principal litigating district of the Province with a total of 12,258 institutions, higher by 884 than any other district.

Classification.

117. Suits for foreclosure of mortgages numbered 2,337 or 39 more than in 1911, and those for redemption rose by 175, thus returning to the 1910 figure. Suits for pre-emption were 705 more than last year, owing to the rise in the value of land. Matrimonial suits still tend to decrease. But there has been a striking rise in insolvency proceedings in the canal colonies, where there must be fewer real insolvents than anywhere. The reason is partly the failure of certain courts to understand the Act, and partly the unfair use made of its provisions by agriculturists to defeat their creditors. Steps have been taken in Lyallpur to ensure proper working of the Act, and the cunning of debtors will soon produce its own anti-toxin in the shape of contracted credit. The unsatisfactory working of the Guardian and Wards Act is again the subject of comment, but it is hoped that a study of the system in force in other provinces will effect some improvement. The growing value of land, especially of house-sites, accounts for the increase of 2,000 this year in suits for possession of immoveable property.

Value of suits.

118. The total value of suits instituted in 1912 was Rs. 3,36,89,842 as compared with Rs. 3,10,15,031, the increase being mainly under the head of suits for money or moveable property. The average value was Rs. 169 in 1912 and Rs. 170 in 1911. Two suits of over a lakh in value were filed, one in Ludhiána and one in Ambála.

Disposals.

119. Original suits for disposal rose from 218,656 to 239,605, and disposals from 192,115 to 208,653. The average duration rose from 65 and 32 days for contested and uncontested suits, respectively, to 70 and 36. It is a matter for satisfaction that, though the number of officers employed in the disposal of civil suits was less by 15 than in 1911, the number of suits decided was 16,538 in excess of last year's total, and this in spite of the fact that many courts were more busily occupied with criminal work. The average duration of suits has risen considerably, but perhaps this may be accounted for by the general increase of judicial work. Munsifs disposed of more than three-fourths of the total volume of cases, and, though their figures show a slight improvement as compared with 1911, an average duration of 64 days for a contested and of 26 days for an uncontested suit appears unduly protracted.

As far as the appellate courts are concerned, the most noticeable feature was the increase of the pending file in the courts of Divisional Judges from 2,919 to 4,001. This is explained by larger institutions and heavier criminal work. The combined outturn of civil and criminal work was larger than in 1911.

Chief Court.

120. In the Chief Court the institutions of appeals show the large increase of 706 cases. The disposals were, however, 823, or nearly 75 per cent. in excess of the preceding year, and the pending first appeals also decreased in number. The assistance of a seventh Judge partly contributed to these results, and presumably also the amendments to the Punjab Courts Act which came into force on 2nd February 1912, though the results of this latter measure will be more clearly marked in future years. The pending file was heavier than it had been since 1906. On October 1st, 1912, the Province of Delhi was separated from the Punjab, but the Chief Court has retained its jurisdiction over the Delhi Courts.

Execution.

121. The amount realised in execution proceedings was Rs. 52 lakhs an addition of one lakh to last year's figure, and the percentage of realisations remained at 27. The question of increasing the pay of the whole process-serving establishment of the Province grows, in the opinion of Judges, more urgent every year.

General.

122. Inaccessibility of revenue records is complained of, and the suggestion made that a special official be appointed in the various districts to hunt out information for the benefit of parties and courts. But the difficulty originates in the fact that civil courts are being more exclusively manned by officers not thoroughly familiar with village records from practical experience of the way in which they are prepared. Such officers are consequently not cognisant of the sources of information available in the revenue records, or of the means to extract it. The matter is of much importance in view of the increasing number and complexity of suits relating to land or involving questions of custom, and of the recent limitations on second appeals. A possible solution of the difficulty would be to put all judicial officers who have not had experience of revenue work or received a special training in settlement through a brief practical course of instruction in the methods by which revenue records are prepared and maintained.

23.—Registration.

General Business.

123. As compared with 1911, the number of compulsory registrations increased by 13 per cent. and was higher than in any year since 1909. The increase is chiefly in sales, mortgages and leases, and is general throughout the Province. In so far as it is susceptible of any general explanation, it may be ascribed to a year of agricultural prosperity and freedom from plague during which the prosperous peasants of the Central Punjab redeemed their ancestral lands from mortgage, and to the steady rise in the value of agricultural land which led to its remortgage for enhanced consideration. Other special and contributory causes are speculative losses among the traders of Hissar and Ambála, mortgages by emigrants in Ludhiána and Hoshiárpur as a preliminary to embarkation, acquisition of proprietary rights by peasant grantees in Lyallpur, and in Dera Gházi Khan the necessity of borrowing money for the erection of private buildings in the new city.

The value of the property transferred increased by 24 per cent. This increase is due to the steady increase in the value of immovable property which has been noticed in previous reports.

As compared with the increase in compulsory registrations, the increase in optional registrations of immovable property is only 3 per cent. As explained in previous reports, the growing confidence in mutation procedure is no doubt responsible for the relatively smaller number of such documents

registered. The decrease in value is all under the heads "Instruments of Lease" and "Awards". As pointed out in last year's report, the figures under these heads in 1911 were abnormal. The variations in the number of optional registrations affecting immovable property are unimportant. The large increase in their value is due to the registration at Delhi of one document relating to property of the value of 30 lakhs.

Land Alienation Act.

124. A large number of *benami* transfers are reported, but in all cases the evasion was discovered not at the time of registration, but at the subsequent mutation proceedings. A registering officer appears to have no legal authority under the Registration Act to refuse to register a transfer which he suspects to be in contravention of the Land Alienation Act, but the matter is under consideration.

Income and Expenditure.

125. The income from registration fees has risen by nearly 14 per cent. owing to the increase in the number and value of registrations. The increase from other fees is 17 per cent., and the total increase in income of all kinds is 14 per cent. The total expenditure is almost exactly the same as last year. With the exception of the increased percentage paid to registering officers, which is of course due to the increase of registrations, the variations under the various heads of expenditure are due to formal causes, such as the separation of the Delhi Province from the Punjab and the lower salaries being drawn by the Inspector-General and his registration clerks in 1912 than in 1911.

23-A.—Legal Affairs of Government.

Opinion Work.

126. The references for opinion disposed of by the Legal Remembrancer amounted to 897, an increase of 38 per cent. since 1907. The Secretary to Government, Civil Department, was responsible for 227 of these, the Irrigation Department for 281, and the North-Western Railway for 121.

Civil Business.

127. The Secretary of State was plaintiff in 30 original suits during the year, 24 of which were decided in favour of and two against Government, while 4 remained pending. One hundred and twenty-eight original actions were defended by Government, against 183 last year, the land acquisition references having decreased. The total enhancement in acquisition cases (which were mainly connected with the North-Western Railway and the King Edward Memorial) was Rs. 1,20,000, the amounts actually claimed by the owners above the Collector's awards being over 7 lakhs. Of the other civil suits, 24 were decided in favour of and 5 against Government, whilst 44 remained pending.

Revenue Suits.

128. There were 3 suits in the original Revenue Courts on behalf of the Secretary of State, and all were decided in favour of Government.

Criminal Business.

129. In the Chief Court 7 original cases were prosecuted by the Government Advocate, 4 successfully; while of 199 revision applications and 51 miscellaneous proceedings, 67·6 and 31·7 per cent., respectively, were successfully advocated. Out of 698 persons, whose appeals were before the Chief Court, those of 498 were decided, the Government percentage of success (whole or partial) being 85·5 against 75·6 last year.

In Subordinate Courts, the Assistant Legal Remembrancer was deputed to prosecute in 33 original trials and 33 revision applications, and was successful in 27 and 25 respectively.

24.—District and Local Boards.

Elections.

130. The elections for membership of District Boards still fail to arouse anything like general enthusiasm. The only district in which interest seems to be taken in voting for members is Hoshiárpur, where for five contested seats (out of eight vacant) there were 14 candidates, and from 67 to 81 per

cent. of the voters went to the poll. The privilege of voting for members of the Provincial Legislature seems to be appreciated by the Board members, but without much reflex action as yet on the voters of the district.

Meetings.

131. In almost all districts the Board meetings were satisfactory in point of frequency. The actual figures are misleading, as they comprise both special and ordinary meetings, which are frequently held on the same day in order to comply with the rules which required that certain business should be transacted at special meetings only. The rules have now been revised so as to provide for one class of meeting only. The attendance of non-official members fell below 50 per cent. in three districts only, and was on the whole satisfactory.

Working of the Boards.

132. There are signs of growing interest on the part of members of District Boards and also of the public in the working of the Boards and in the policy pursued by them with regard to education, communications, arboriculture, etc., though questions of sanitation cannot be said to arouse much enthusiasm. The District Boards are in a much better financial position than formerly, owing to the abolition of contributions to Government, the liberal grants by Government for education, roads and sanitation and the raising of the local rate in several districts. Progress in many directions has been rendered possible by these salutary measures, and public spirit has been awakened by the prospect of opportunities which were previously out of reach. It is becoming increasingly more common to find members assisting at local fairs and functions, supervising expenditure, and discussing subjects that come before meetings.

The Lyallpur District Board is very active in directions off the beaten track, and, though in the case of an experimental farm it seems to have acted *ultra vires*, it takes a real interest in philanthropic movements and the question of imparting religious education to school children, which is one of the most difficult problems of the day. Two other Boards are establishing industrial schools to teach weaving, pottery, carpentery and smith's work.

Devolution of work.

133. Opinions vary as to the utility of sub-committees, but there can be no doubt that as institutions they have come to stay, and that they afford valuable opportunities for good work on the part of members. The system of local sub-committees, which has worked for some time with success in Hissar, is recommended by the Lieutenant-Governor to other districts.

Education.

134. The Boards were unable to spend more than half the Government grants for education, chiefly because of the lack of trained teachers. In Ambála the educational authorities were asked to take in twenty more men than usual in the Normal School, but were unable to accede to this request. It is, however, added that the question of opening a second Normal School is under consideration. The Commissioner of Ambála suggests that two or three districts should combine to found a Normal School to train their own men. In Karnál, Shahpur, Multán, Montgomery and Lyallpur training classes were opened in connection with existing middle schools, but from Lyallpur it is reported that the classes were not a success. No further difficulty, however, should be experienced at Lyallpur, as since the close of the year under review a Government Normal School has been opened there. This district still holds the lead in educational expansion, no less than 55 new Primary Schools being opened during the year.

Medical.

135. The Boards' expenditure increased in spite of diminished endowments and contributions from Government. The Karnál District Board opened their King Edward Memorial Hospital during the year, the cost being a lakh and a half to the Board, besides private subscriptions. In Lyallpur also

large additions to hospital buildings were made. In Gurdáspur the District Board, with the Commissioner's sanction, gave grants towards hospitals and other medical needs of the committees of small notified areas, which were in need of assistance, in cases where the hospitals or other institutions served areas subject to the District Board also.

Veterinary.

136. Considerable progress has been made in providing new veterinary hospitals. Four have been opened at head-quarters of tahsils in the Hissar District. The Deputy Commissioner of Shahpur calls attention to the increased tendency on the part of the public to take advantage of veterinary hospitals. Expenditure on bulls and stallions has also risen by Rs. 10,000. The Commissioner of Lahore is strongly in favour of the practice in Lahore, where the District Board purchases bulls and then re-sells them at half price to purchasers in the district. The Siálkot Board also proposes to adopt this plan. The result in Lahore is that the Board of this district, with the smallest income in the Lahore Division, expended Rs. 11,587 on bulls and stallions as against Rs. 4,510, the next highest expenditure in the Division.

Arboriculture.

137. The District Boards of the Province are in possession of very valuable and widely-extended property in the shape of road-side trees and gardens: some have more and some less, but in no district can arboriculture be termed unimportant. The results in each district vary considerably, some showing a handsome profit, others a loss. But working plans have been made out and efforts are generally made to manage the district trees well. In spite of all this, one report shows that sixteen miles of young plants have died during the year, another that serious irregularities in the sale of roadside trees have been revealed by the local audit, there being in the same district a loss of Rs. 4,500 on the year's working, in spite of fertile soil and abundant rainfall. The supervision of district arboriculture must always be a difficult matter, and for its due discharge the local agencies cannot always be sufficient. It is therefore satisfactory to note that use is being made of the Forest School at Chánga Mánga for training men to carry out arboricultural operations in tahsils, and if they are of the right stamp there should be a gradual improvement in the income of District Boards under this head.

Sanitation.

138. The system of imposing taxes in large villages for sanitation purposes is being extended in Lyallpur and other districts, and the results will be watched. Expenditure of all boards on sanitation rose by Rs. 3,679, but is still small.

25.—Municipal Administration.

General.

139. The loss of the first class municipality of Delhi has made a large gap in the history of local self-government in the Punjab, and in estimating progress the statistics relating to Delhi and two notified areas in its environs must be excluded: the advantage of having on the border of the province an Imperial city with large funds available for model improvement schemes will be realised more as time goes on. There are now 104 municipalities with an aggregate population of a million and a half and 1,162 members, ten per cent. of whom are Europeans and twenty per cent. officials. The number of notified areas is now 88, two reduced municipalities and one new town (Talagang) having been added, and 16 abolished. The notified areas contain 337,000 inhabitants with 418 members.

Elections.

140. Last year's remarks hold good, and many elections are decided in private before the polling begins: on the whole the interest aroused seems to be increasing. There is evidence, however, of bribery at elections in Rohtak, and the provisions for annulling the election of candidates found guilty of corruption will have to be enforced where possible. The elective system has

been introduced in two towns in Ferozepore, and proposals for similar action in Lyallpur have been formulated. The restoration of elective rights to Hissar and Bhiwáni is under consideration.

Meetings.

141. On the whole, the number of meetings held during the year was satisfactory, but it is sometimes found difficult to get a quorum in the Canal Colony towns. The absence of the official president is given as the reason of the small number of meetings of one municipality, but there is at present no intention of appointing more non-official presidents.

Working of Committees.

142. The committees of Murree and Ráwalpindi, which have been recently overhauled, are doing better. The trials of certain prominent persons in Siálkot, mentioned last year, have resulted in the conviction of two Octroi Muharrirs for embezzlement and the resignation of the Secretary, and of various other officials, some officials also being dismissed. Another large municipality, Multán, is in a far from satisfactory state : the audit notes reveal irregularities in the accounts, laxity in administration, and insufficiently strict observance of rules, and there is far too much sectarian quarrelling. The latter fault is also found in other committees, in Gurdáspur particularly, and Gujrát. The cases in which proceedings of committees had to be overruled were not numerous or very important.

The working of Committees on the whole is reported to be satisfactory, but the above facts show how impossible it is to relax the supervising control exercised by the executive.

Rules and bye-laws.

143. Byelaws were framed in five towns dealing with the sale of milk and butter, the exercising of ponies, registration of dogs, the use of hackney vehicles for carriage of infectious patients, and a wheel tax.

Taxation.

General.

144. Octroi is in force in 98 towns out of 104; taxes on houses and lands in 11, on animals and vehicles in 14, a water rate in 6, and a conservancy tax in 4 towns. Servants are taxed in four towns and dogs in four. In Batála the frontage tax imposed last year has not worked at all smoothly : after much opposition by interested members the rates were reduced, but even so the opposition continued, and only a small proportion of the tax was collected.

New taxes.

145. A scheme for a terminal tax is being worked out for three municipalities, and in four notified areas a tax based on income was introduced in place of taxation by fixed grades.

Octroi.

146. The income from octroi has risen almost everywhere. In Siálkot the rise amounted to ten per cent. owing to the better supervision recently introduced, and to 19 per cent. in Gurdáspur and Muzaffargarh, for similar reasons. In Gujránwála the new schedules swelled the octroi returns by no less than 56 per cent. increase. Notified area receipts remained fairly steady. The cost of the collection of octroi generally did not rise or fall. It is lowest in Lahore, 4·24 per cent., and not much higher in Gujránwála and Amritsar, but in most municipalities it is 15 to 16 per cent., and in two towns 22 per cent.

Refunds.

147. Refunds of octroi vary considerably throughout the Province. Of the larger towns, Siálkot shows the highest figures with 43 per cent. This matter is being looked into ; Siálkot is becoming a very large exporting centre, and such a large percentage is crippling. In some smaller towns higher figures prevail, and it has been found necessary in some cases to revise octroi limits.

Sanitation.

148. Siálkot suffered from plague, but the efforts of the authorities were regarded with apathy by the people in general. Plague was much less virulent than usual, but small-pox appeared in several places. Drainage schemes in Lahore, Amritsar, Multán, Siálkot, Ráwalpindi and Chiniot are being liberally assisted by Government, and projects for water-supply in Amritsar, Ambála, Siálkot and Multán.

Extra-mural lands.

149. The tendency of the more well-to-do to build houses outside the larger towns—such as Lahore, Ráwalpindi, Jhelum, Gujrát, Ludhiána—is bringing into prominence the question of suburban town-planning. The whole question was exhaustively discussed (along with general sanitary problems) at a Sanitary Conference held at Simla in August 1913, and certain resolutions were passed which are now being considered by Government.

26.—Military (Volunteers).

Strength and Distribution of Volunteer Forces.

150. The strength of the Volunteer Corps on the 31st March 1913 is reported to have been as follows:—

Corps.	Company.	Station.	Officers.	Non-Commissioned Officers.	Privates.	Total enrolled strength.	Total number of efficients.	Sergeant-Instructors.
Punjab Light Horse.	...	Field Officers and Staff	7	...	...	7	7	4
	A	Lahore	4	20	99	123	121	...
	B	Ambála	1	5	50	56	55	...
	C	Ráwalpindi	3	9	50	62	61	...
	D R½	Pesháwar	1	2	11	14	12	...
	D L½	Amritsar	1	3	12	16	10	...
	Detachment	Delhi	...	5	24	29	27	...
	E	Lyallpur	...	3	16	19	15	...
		Multán	...	...	4	4	4	...
		Jhang	...	...	2	2	...	...
		Sargodha	...	...	2	2	1	...
		Montgomery	...	1	6	7	7	...
	...	Reservists	1	...	71	72	72	...
	...	Add for Supernumerary Officers ...	11	...	...	11	...	...
		Total ...	29	48	347	424	392	4
1st Punjab Volunteer Rifle Corps.	...	Field Officers and Staff	10	...	...	10	10	9
	A., B., C. and Cadet ½ Company.	Lahore	7	36	196	239	232	...
	D	Ráwalpindi	3	12	115	130	129	...
	E	Amritsar	4	10	53	67	63	...
	F	Delhi	1	9	72	82	78	...
	G	Murree	2	6	67	75	74	...
	H	Do.	...	9	64	73	73	...
	I	Pesháwar	4	16	111	131	131	...
	K	Ferozepore	3	12	89	104	104	...
	L	Srinagar	4	7	59	70	67	...
	M	Siálkot	2	7	49	58	57	...
	...	Reservists	...	...	68	68	65	...
	...	Add for Supernumerary Officers ...	15	...	...	15	...	...
		Total ...	55	124	943	1,122	1,083	9
Simla Volunteer Rifle Corps.	...	Field Officers and staff	8	...	...	8	8	3
	A., B., C., D., E and H	Simla	16	60	393	469	418	...
	F and G	Sanáwar	4	12	166	182	178	...
	...	Reservists	2	...	74	76	56	...
	...	Add for Supernumerary Officers ...	20	...	...	20	...	...
		Total ...	50	72	633	755	660	3
North-Western Railway Volunteer Rifle Corps.	...	Field Officers and staff	11	...	...	11	11	5
	A, B., C and D	Lahore	10	42	514	566	559	...
	E	Ambála	2	9	138	149	149	...
	F	Saháranpur	2	7	142	151	144	...
	G	Ráwalpindi	3	15	135	153	152	...
	...	Reservists	...	...	30	30	24	...
	...	Add for Supernumerary Officers ...	2	...	...	2	...	...
		Total ...	30	73	959	1,062	1,039	5

The Punjab Light Horse, the 1st Punjab Volunteer Rifles, and the North-Western Railway Volunteer Rifles were inspected in February 1913 and the Simla Volunteer Rifle Corps in May 1913.

The results were considered satisfactory.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1913.

(2) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1912-13.

(3) Annual Report of the Government Cattle Farm at Hissar for the year 1912-13.

(4) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1912.

(5) Report on the working of Co-operative Credit Societies for the year ending 31st March 1913.

Weather and Crops.—(1) Report on the weather of the Punjab for the year 1912-13.

(2) Punjab Season and Crops Report for 1912-13.

Horticulture.—Report on the Government Agri-Horticultural Gardens, Lahore, for the year ending 31st March 1913.

Forests.—(1) Progress Report of Forest Administration in the Punjab for 1912-13.

(2) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1912-13.

No special report on arboriculture was issued during the year.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1912.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year ending March 31st, 1913.

(2) Report on the External Land Trade of the Punjab for the year 1912-13.

(3) Report on the Joint-Stock Companies in the Punjab for the year 1912-13.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1912-13.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1912-13.

(2) Land Revenue Report as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—(1) Statistics of British India, Part II, Commercial (Co-operative Credit Societies).

(2) Administration Report of the Army Remount Department in India for the year 1911-12.

Crops.—(1) Agricultural Statistics of India, volume I, tables 2-I and 3-I.

(2) Area and yield of certain principal crops in India.

(3) Prices and Wages in India.

(4) Variations in Indian Price Levels, 1913.

Forests.—Statistics of British India, Part IV (*b*), Finance and Revenue.

Mines and Quarries.—(1) Statistics of British India, Part I, Industrial.
(2) Records of the Geological Survey of India, volume XLIII, Part 2.
(3) Report of the Chief Inspector of Mines in India under the Indian Mines Act (VIII of 1901) for the year ending 31st December 1912.

Manufactures.—Statistics of British India, Part I, Industrial.

Trade.—(1) Accounts of the Trade carried by Rail and River in India.

(2) Statistics of British India, Part II, Commercial (Joint Stock Companies).

Railways.—Administration Report on Railways in India for the calendar year 1912.

Irrigation.—Statistics of British India, Part III, Commercial Services.

27.—Agriculture.

Scientific.

Research and experiment.

151. Valuable work continues to be done at the Lyallpur and Gurdáspur Stations, where varietal experiments have confirmed the results of previous years, Pusa wheats being again shown to be unsuitable for the Punjab. Different treatments of tillage of wheat showed that rolling the ground after sowing gives no advantage, and bone meal is unprofitable, but deep ploughings give better results than shallow. The wheat survey was carried on in Hoshiárpur, Gujrát and Lyallpur Districts, and one type of wheat is found to predominate in Lyallpur, while two others are commonest in the former districts. All three are excellent Punjab types, and the selection of types suitable for distinct localities is now made possible by the survey as it goes on. American cotton is now firmly established in Lyallpur and Jhang, and will probably succeed in Shahpur too. The yields were heavy in the year under report, and the demand for American seed outran all supplies in sight, and with a good year following, seed for some 10,000 acres will probably be available. At the same time the bulk of the Punjab cotton crop will always consist of one of the short-stapled indigenous varieties, and suitable varieties will be selected and multiplied locally. Land for a large cotton farm has been selected at Hánsi. The boll-worm parasite was successfully hibernated, a result which constitutes a long step in advance towards the protection of cotton crops from insect pests. The analytical survey of sugarcane in Gurdáspur was continued, and the effect of frosts on the cane was observed ; certain canes were shown to be frost-resistant, which is an important quality in the Punjab. The Agricultural Chemist, Mr. Barnes, when on leave last year, was deputed to Hungary and Egypt to study the manufacture of sugar from beet and cane in those countries, and his report will be a valuable one when it comes out. Investigation was also extended to the preservation of stored wheat from weevil, the lateral movement of *reh* salts, and the rise of water level in the Chenab Colony.

Pests.

152. The cotton crop of 1912 did not generally suffer from boll-worm attacks. Most of the cotton areas had good monsoon rains, which destroyed the early broods of boll-worms. In the Jhelum and Chenab Colonies and in Multán, however, the rains failed and the percentage of boll-worm attacks was fairly high (from 16 to 32 per cent.) during July and August. The parasite (Rhogas Lefroyi) appeared at the Lyallpur farm in the end of July and was established in the parasite breeding plot, and in August boxes of parasites were distributed throughout the Province and materially aided in keeping down boll-worm. The cause of root-rot in cotton, which causes so much damage, was discovered in the year under report, to be due to a nematode worm. Special attention was paid also to beetles and grass-hoppers. The results obtained by cutting out " dead hearts " of sugarcane, in order to combat the moth-borer, were very satisfactory ; the simplicity of the method appeals to the zamindar.

Demonstrations.

153. Three demonstration plots were started in Jullundur to show the methods of dry farming, which are recommended by the department, in the zamindars' own fields : the demonstrations were on the whole successful. Some 20 acres of land in the Attock District will also be taken on lease for the same purpose. Demonstrations of implements were carried out in Gujrát, Montgomery, Lahore, Hoshiárpur, Hissar and Gurdáspur Districts. The 48 chain harrows distributed were not thoroughly tried by the zamindars; bullock-hoes for cotton and maize were under trial ; reaping machines were used with good results, which will be still better when the practice of hiring them out is established ; and a steam thresher was shewn in working at Lyallpur fair. Agricultural associations were started in six districts for the purpose of disseminating knowledge and implements alike, and if combined with the co-operative movement, this sphere of activity promises valuable results. Working

in the same direction, an agricultural co-operative conference was held at Lyallpur and attended by some 300 persons, who saw and discussed the work being carried out on the Government farms.

154. Well-boring has not been so successful as other activities of the Department; yet 216 wells were bored and the water-supply increased in 116 wells, and 11 out of 14 trial borings found water. The Agricultural Engineer when appointed will probably effect a revolution in the extent and results of the operations. Agricultural engineering.

155. No progress has been made at Sakesar, and it is proposed to hand over the work of guarding existing olives there to the Forest Department. At Khairi Murat there are 4,000 grafted trees on about 80 acres of land, half of which was cleared during the year, and 2,000 trees grafted. At Gandalla work was begun on 10 acres of cleared land, by planting olive trees from Lahore and Choa Saidan Shah gardens: 40 acres of olive jungle have been cleared of other growth. Almonds will be inter-planted, so as to reap a profit while the olives grow up. The expenditure was Rs. 7,474 in all. Olives.

156. Poultry at Lyallpur have not succeeded owing, it is reported, to the bad climate. The central poultry station at Lahore, in the Zoological Gardens, seems to have had better results, and there are now 160 chicks on the farm, the demand for pure bred chickens and eggs being on the increase. Poultry.

157. The results in Gurdáspur, in which district alone is sericulture established, were not satisfactory owing to the ignorance and slovenliness of the rearers; but a step forward has been taken outside that district, by having the rearings carried out by villagers in their own homes instead of by canal officers, thereby achieving a demonstration open to the surrounding villages. Most of the rearers in this case had never seen a silk worm before, and the results were surprisingly good in the Rúpar and Kasúr Tahsils. Sericulture will be improved next year by measures taken to secure even and early hatchings, and promises to the poorer peasants a way of earning Rs. 30 to Rs. 40 by six weeks' work. Sericulture.

158. Twenty Smyrna fig trees are now established at Lyallpur, which were sent out by Lieutenant-Colonel Henderson, late I.M.S., and are doing well. It may, however, be necessary to import blastophaga from Smyrna to ensure fertilisation. Smyrna figs.

159. Five plantations were established in 1910 and 1911 where over 2,000 trees were planted, of which 1,197 survive: last year another plantation of 808 trees was started in Leiah and many gaps were filled up in the older plantations. Altogether 5,166 trees have been imported and no more are now being received, as it is advisable to ascertain how those already planted promise to turn out and which varieties are most suitable. 95 trees bore fruit this year, much earlier than was expected, and the Economic Botanist is identifying the varieties as far as possible. The Arab date-grower has completed his term of three years and gone home. Enquiries show that the crop of date fruits of the Punjab is only worth about Rs. 12 lakhs per annum, which can be increased five-fold by merely substituting moderately good trees for the inferior female ones, and for male trees which are not wanted if hand pollination is resorted to. Dates.

Loans to Agriculturists.

160. Advances rose considerably during the agricultural year ending September 30th, 1912, as was natural in a dry year, but recoveries were good. Loans amounting to rather over 2 lakhs were advanced under the Land Improvement Loans Act, and nearly 6 lakhs under the Agriculturists' Loans Act. Nearly 17 lakhs under both Acts were outstanding from previous years, making a total of 25 lakhs. Five-and-a-half lakhs were due for collection Advances made.

during the year, of which some Rs. 5,30,000 were collected. The outstanding balance at the close of the year was rather over 19¾ lakhs, more than half a lakh of which was suspended by competent authority and some Rs. 29,000 were overdue. Interest due for collection amounted to Rs. 1,23,000, all of which was recovered with the exception of some Rs. 3,300. The loan operations during the year gave a profit to the Local Government of rather over half a lakh.

Under the Land Improvement Loans Acts, the Multán Division took nearly ¾ths of a lakh, the Ferozepore District more than half a lakh, and the Attock District Rs. 15,500. The amount of loans under this Act still out is large in the following districts :—Gurgaon 1½ lakhs, Attock over 2 lakhs, Multán nearly 3¾ lakhs, and Muzaffargarh rather over one lakh. The reports of Deputy Commissioners show that the improvements for which the loans are granted receive on the whole a thorough inspection.

Progress has been made in the preparation of district reports dealing with the advisability of well-boring operations and the necessity for takkavi.

Only about Rs. 64,000 out of the 6 lakhs distributed as loans under the Agriculturists' Loans Act for cattle and seed were required in the Delhi and Jullundur Divisions. The scarcity of fodder was acute in Siálkot, Gujránwála and Montgomery and in all districts of the Ráwalpindi Division except Ráwalpindi. The Commissioner of that division remarks that a very large proportion of the money advanced was for the purchase of fodder, and it is satisfactory that so small a proportion of the demand had to be suspended.

Co-operative Societies.

General.

161. Expansion is still the chief feature of the co-operative movement. Agricultural societies increased during the year by 62 per cent., their working capital by 72 per cent., and their members by 45 per cent., on last year's figures. They now number 2,780, and it is hardly a matter of surprise that an Assistant Registrar has been appointed. Five new central banks were opened, and three unions, all of the latter, however, being in one district. The central banks and unions control Rs. 28 lakhs of net capital, and the agricultural societies over Rs. 80 lakhs net. This progress has been made at small additional cost to Government, each society costing Rs. 11 or Rs. 12 a year against Rs. 51 four years ago. Sub-Inspectors paid by the societies increased from 6 to 20 during the year.

Central banks and unions.

162. The five new central banks are all in important districts from a co-operative point of view. More than half the working capital of the 17 central banks is derived from members : they lent out Rs. 11 lakhs during the year, and only about 3 per cent. of the outstandings is shown as overdue. Banks started three years ago are already paying 10 or 12 per cent. The three new unions are all in Gurdáspur : the stage of federation has not yet been reached, and central banks and unions are still almost entirely financing agencies.

Agricultural societies.

163. The capital held by the agricultural societies has grown faster than the number of members and societies, and now Rs. 75 is available per member against Rs. 63 last year. It is derived from share capital and profits 34·4 per cent., deposits by members 17·7, and by non-members 20·9 per cent., while loans from central societies take up 26·2 per cent. Government loans have dwindled from 1·5 to 0·7 per cent. Outside loans have risen considerably owing to the larger number of societies started, to borrowings by the older societies for payment of old debts, and to purchase of proprietary rights in the canal colonies. Shares are becoming more and more non-returnable. This is the result of increasing confidence in the societies, and at the same time all new societies are obliged to agree to this condition.

A disquieting feature is the large proportion of loan repayments which are admittedly overdue, the danger of which to the societies is obvious, and is being carefully watched by the rather insufficient inspecting staff. The amount overdue is shown as 16 per cent. of the loans.

Non-agricultural societies.

164. In this branch of co-operation the Punjab still lags behind. There are now 31 societies, with 2,973 members and Rs. 2½ lakhs of capital. The conditions (among weavers at any rate) are more complicated and difficult to deal with than those of rural societies, involving as they do the handling of material and the subversion of older methods. Societies on the model of German Popular Banks would seem to have a fair prospect of success. Some of the non-agricultural societies are doing very well, such as the Credit and Store Society of the Police School at Phillaur, and of the New Egerton Mills at Dhárriwál, and the credit society formed in the 7th Lancers at Ferozepore.

Army Remount Department.

Imperial.

165. The figures of purchases from the Canal Colonies during 1911-12 are striking. Out of 593 country-bred horse stock bought by the Department, 539 were got from the Punjab, and of these 411 from the Jhelum Canal Colony (as compared with 370 last year)—182 of which were sired by Arab, 96 by Australian, 96 by thorough-bred English, 30 by country-bred and 6 by stud-bred stallions, and only one sire was untraced. The *abadkars* are the backbone of the scheme. In the Chenab Colony the figures of young stock bought for British and Indian Cavalry, and of mules, have risen in the last seven years from 7, 4 and 29, respectively, to 66, 59 and 774, the improvement being continuous and rapid. The Mona Horse Stud has been closed owing to the lack of good country-bred mares: the stock is being disposed of. Out of 331 horse stallions at stud, 247 were stationed in the Punjab. The stock from thoroughbred English do best in the show-ring and next come stock from Australians. Out of 333 donkey stallions, 288 were in the Punjab.

Provincial.

166. District pony stallions numbered 166, 109 of which were Arabs, 3 stud-bred and 13 country-bred. Seven donkey stallions out of 8 were removed and one left at Ráwalpindi. The work done by the pony stallions has increased from 8,849 coverings to 9,877, the produce from 2,722 foals to 2,991, while the percentage of foalings has risen from 33·66 to 34·25.

Horse and donkey fairs.

167. There were eleven fairs at which officers of the Department attended. All the fairs were successful, except that held at Dera Gházi Khan, where lack of fodder prevented many animals coming. The Pindi fair showed an increase of entries in spite of the bad year, but there was no young stock fit for remounts. In Gujrát the Deputy Commissioner is discouraging the keeping of private stallions, a practice which impedes horse-breeding in the district. In Lyallpur a very successful fair was held, 50 per cent. more horses, mules and donkeys being brought in than last year while a record entry competed for prizes. The Sharakpur Tahsil is becoming a great centre for horse-breeding, and the attendance at the Háfizabad fair increased from 2,855 last year to 6,145 horses, mules and donkeys, while the entries for prizes amounted to 352 as compared with 488. In Shahpur the smaller breeders are getting a better chance, the richer men having gone to the Canal Colonies.

In all Rs. 17,708 was awarded in prizes at horse and donkey fairs, and of this the Imperial Government provided Rs. 14,600, the Provincial Government Rs. 3,260, Local Funds Rs. 243, and private subscriptions Rs. 80.

Veterinary and Live-stock.

Civil Veterinary Department.

168. No decision has been arrived at with regard to the proposals made to create Deputy Superintendents, increase the number of Veterinary Inspectors and Assistants, and to extend the College course.

The number of hospitals increased by 4 to 113, at which 270,889 cases were treated against 241,291 last year.

Contagious diseases.

169. Twenty-eight thousand one hundred and twenty-five deaths were reported from contagious diseases against 25,455 last year. There was a large number of outbreaks and the policy of taking fees for inoculations was unsuccessfully tried this year, with the result that inoculations decreased from 32,096 last year to 18,335. This policy has now been discontinued.

The Chief Superintendent spent some time investigating the causes of a contagious pneumonia among *gaddis'* flocks in Kángra, Chamba and Mandi. Goats only are affected, and the disease is aggravated by the daily march which is enjoined by regulations. Diseases to the feet caused by injuries from hill-climbing were also investigated and treated.

Cattle-breeding.

170. Cattle-breeding will always be handicapped until the letting loose of brahmini bulls is brought under control: this might be done by co-operation between District Boards and donors. Some Boards purchase bulls for Rs. 200 and sell to responsible men for half the price: and in time agricultural banks will no doubt be called in to aid in the important work of bull distribution. The stud bulls at work increased to 544.

Horse-breeding and shows.

171. Sixty-eight horses and pony-stallions were at work in non-selected districts and 74 donkey stallions. Covering registers show satisfactory work and are being more carefully kept, and the Department is endeavouring to get more information regarding the young stock produced. Horse-shows were held in six districts during the year and cattle fairs in 19 districts.

Wool.

172. The Merino rams now number 12 with 25 ewes. Merino sheep-breeding now looks more promising, and has been taken up by three districts and the Mamdot Estate. The Kángra and Kulu breeding is growing more popular.

Government Cattle Farm, Hissar.

General.

173. In consequence of the abolition of the Inspector-General, Civil Veterinary Department, the control of the Government cattle farm was transferred to the Provincial Government, and is now worked under the Chief Superintendent, Civil Veterinary Department.

For the second year in succession the farm has suffered from shortage of fodder owing to partial failure of the monsoon and to insufficient canal supply of water: an experiment with a tube well is to be carried out. Lower wages due to local scarcity have been counterbalanced by increased expenditure on stall-feeding. The cattle have been kept healthy owing to the excellent system of rotation of crops, and outbreaks of disease were checked. The farm does not pay its way, there being a large deficit on the year's working, and some change in the pricing of animals issued will probably be necessary. At the same time the revision of the establishment bill is before Government. The quinquennial valuation committee have added Rs. 1½ lakhs to the value of live-stock.

Cattle-breeding.

174. Ninety-two bulls were issued to District Boards, which is a record figure. Only 623 calves were born during the year, which is the lowest amount for some years: this is due to poor seasons. The number of cows is approaching the sanctioned scale of 1,500 which will have to be increased to 2,000 if the demand is to be met. One hundred and twenty-five siege-train bullocks were issued to the Military Department.

Mule and donkey-breeding.

175. Twenty-eight mules were issued to the Military. There was no change in the number of donkey stallions. Eighteen donkey colts were sold.

Sheep.

176. The sheep did well on the whole, and the experiment of making a pure bred Merino ram with half-bred ewes seems to have very successful prospects.

28.—Weather and Crops.

177. Winter conditions were prolonged into April, and the monsoon arrived late. May and June were dry and the monsoon came in heavy showers on July 9th—13th and again from the 16th—21st. The result was that though the July average was below normal in most districts, nearly normal sowings were made on unirrigated land. In August there were some heavy downpours, and more than the average amount of rain fell over a large part of the Province, but this only lasted till September 3rd for the western half, the eastern half benefiting till September 27th. The result was that young cotton and cane did well in the April rains, irrigated cotton was favoured by the total moderate rainfall, and cane by the copious showers in July and August. The unirrigated crops suffered somewhat by the fitful character of the monsoon. Bollworm threatened at the end of July, but was washed out of the cotton in August. Weather in 1912-13.

Autumn sowings were restricted in the western unirrigated tracts by the early cessation of the rain which did not recommence till late November when further seed was put in. January and the first half of February were dry, but the standing *barani* crops were saved by good rains later on in February and in March. All crops benefited by this timely precipitation, except that in parts pollination of wheat was interfered with, shrivelled grain resulting. The unusually dry weather from October to January reduced the yield of unirrigated crops, but the absence of frost was favourable to cotton and cane. In parts of the Central and North-West Punjab fodder was very scarce between December and May, and large quantities were imported from districts where there was a surplus.

178. The statistics for the year's crop are as follows :— Crops.

	1911-12. Acres.	1912-13. Acres.	Normal. Acres.
Total sown area	26,098,955	27,510,022	28,162,715
Failed	4,786,033	4,826,154	4,855,828
Matured	21,312,917	22,683,868	23,306,887

Thus, as far as statistics go, the year was a considerable improvement on its predecessor, and was only slightly below normal. The harvests will be reviewed separately in the succeeding paragraphs.

179. The total area sown was approximately normal both for the whole Province and by divisions. Owing to the late arrival and early cessation of the monsoon, an unusually large proportion of the sowings were irrigated. Kharif 1912.

Twenty-four per cent. of the sowings failed, the failure being nearly all on unirrigated land in the south-east, south-west and north-west. The highest percentages of failure were in Gurgaon and Dera Gházi Khan (27 per cent.), Rohtak and Multán (31 per cent.), Hissar and Ráwalpindi (41 per cent.), Jhelum (42 per cent.), and Attock (46 per cent.).

In Gurgaon the failure was due to floods, and in Multán and Dera Gházi Khan to the poor flowing of inundation canals, while in the other districts it was due to scanty September rainfall.

180. The sown area was only 4 per cent. below normal, a deficiency of 14 per cent. in the unirrigated area being counterbalanced by an excess of 10 per cent. in the irrigated area. Thirteen per cent. of the total sown Rabi 1913.

area failed, the percentage on unirrigated land amounting to 21. Hissar and Rohtak in the south-east dry area and Jhelum and Ráwalpindi and Attock in the north-west dry area fared badly in this as in the kharif harvest.

Chief staples.

181. Rice rose to 108 per cent. of the normal, owing to the large proportion irrigated: jowar and bajra are mainly unirrigated crops and suffered in some districts from the early cessation of the rains; on the whole however 82 per cent. of jowar and 95 per cent. of bajra matured. Maize was just short of the normal. Sugarcane was largely fed to cattle owing to scarcity of fodder in parts of Amritsar, Siálkot, Gujránwála, Gujrát and Shahpur, so that in spite of a favourable season the yield of *gur* was only 95 per cent. of the normal. Cotton did well, 79 per cent. being irrigated, and though the unirrigated portion was everywhere poor, the total production was one per cent. above the normal. The season was favourable also for irrigated wheat, which was a little more than half the total crop: but in the north-west dry area, where it is of most importance, the drought was too prolonged. The total yield is estimated at 19 per cent., while that of gram was 5 per cent. above normal. Gram, four-fifths of which was unirrigated, is better able to withstand drought than other spring crops, such as barley, which fell 15 per cent. below the normal. Export of Indian barley has decreased, but it had already obtained a good footing abroad. The area under rape and toria decreased from 1,447,709 to 887,781 acres, all due to short sowings of *barani* rape, and crop-cutting for fodder. Irrigated toria is estimated at 106 per cent. of the normal, but this figure was brought down by *barani* failure to 84. The previous estimated yield per matured acre of rabi oil-seeds was low, and at the recent revision it was raised by about 56 per cent.

Irrigated area.

182. The total irrigated area was 11,589,775 acres, being above the normal at both harvests. Of this area, 3,601,882 acres were irrigated from wells, and most of the remainder from canals.

Prices.

183. The year was a favourable one for the farmer, as the harvest prices of the most important crops—wheat and cotton—rose even higher than in 1912. The average price per maund of wheat was Rs. 3-1-0 as compared with Rs. 2-15-0 in 1912, and of cotton Rs. 7-15-0 as compared with Rs. 7-10-0. The prices of barley, gram and rabi oil-seeds were steady, and the only valuable crop which fell in price was cane, the price of raw sugar having dropped seriously from Rs. 5-6-0 to Rs. 4-7-0 per maund. Jowar, bajra and maize are produced almost entirely for food, and the price of the two former fell, while that of maize was steady. From the point of view of trade the year was a prosperous one. Stocks of grain were reported to be sufficient everywhere, except in Jhelum and Ráwalpindi, where three out of the last four harvests have been poor.

29.—Horticulture.

Agri-Horticultural Gardens, Lahore.

184. The improvement of the gardens was continued during 1912-13, and, though the expenditure rose, this was due to non-recurring outlay on lining water-courses; while the sales of garden produce realised Rs. 748 more than last year. Government contributed Rs. 3,000 for minor works in addition to the usual grant of Rs. 13,000. The watering of pot plants is now done by the students, and thereby 26 bhisties have been dispensed with. The mali classes continue to be successful, and the boys have increased to 26. A chaudhri class was started with two of the most intelligent boys. A list of the trees grown has been published with a map to show their situation, in order to assist botany students. Special attention was paid this year to clearing ground for an orchard; peaches from the garden sold well, and peach trees will be put down in the orchard, which will be more easy to supervise than the present scattered collection of fruit trees. A working plan has been drawn up for the next five years. Arrangements have been made for a larger and more continuous display of flowers: roses have been planted out in large beds. The eucalyptus experiments were continued, seeds of 90 new species and varieties being planted and about 15,000 young plants distributed from the gardens.

30.—Forests.

Forest Department.

185. A short Act to regulate the establishment of timber depôts and the sale of timber on Punjab rivers was passed by the Provincial Legislative Council and assented to by the Governor-General in Council during the year. It is designed to reduce theft of timber in transit. Government has also reverted to the old practice of associating the Financial Commissioner with important questions of forest administration, and now such cases are either referred to him for opinion or sent through him to Government by the Conservator. This procedure has had good results already in connection with the measures taken to stop forest fires in Ráwalpindi. A definite scheme has also been drawn up by consultation between the Financial Commissioner, the district officials and the Forest Department to restrict excessive grazing in Kángra. General.

186. There has been a net reduction of 4,687 acres in the area of the Punjab Circle, which is almost entirely due to the transfer of 2,458 acres to the Canal Department in the new colonies, the abandonment of 1,763 acres in Kángra and Bashahr to cultivation, and the loss of 555 acres due to rectification of boundaries chiefly in Shahpur. The change in the boundaries of Shahpur and Gujrát Districts has also necessitated a redistribution of forest land in the Shahpur and Chenab Divisions. Measures are being taken to disforest large areas in the Chenab, Montgomery and Multán Forest Divisions with a view to the colonization of the areas under the new canals. Alteration in area.

187. In Lahore Division Rakh Tera, of 408 acres, was declared a reserved forest. Settlements of areas for irrigated plantations in this and the Multán and Montgomery Divisions are proceeding. In Ráwalpindi the new revised *guzara* rules for the withdrawal of official control were issued. In Kángra an important point has been decided, with regard to closure of over-grazed areas, and in future such closures will be made much more freely than in the past. Fees have also been fixed for all animals grazing in protected forests in Kángra and will be levied along with the new land revenue. At the same time proposals for the abandonment by the Department of certain detached forest areas are under consideration, and the situation in this district should improve in the near future. The settlement of the Kángra jagirs is proceeding. Forest settlements.

188. The group system has not yet been adopted; its working in Chamba and Pabar forests is being watched. No new working plans for departmental forests were prepared or sanctioned during the year. The plans for Subáthu Cantonment and Madhan State have been accepted by the authorities concerned, and a revised plan for the Dalhousie Range forests in Chamba submitted to the Inspector-General of Forests. The draft working plan for the Dharmsála Municipal forests has been received from Dehra Dun College. Owing to the unfortunate illness of Mr. Gibson, the plan for the Pabar forests in Bashahr is not yet ready. The plan for Kángra will have to be revised at an early date by a special officer when available, and plans will be needed for the areas allotted to Sillahdar Camel Corps in Ráwalpindi and Jhelum. The revision of the working plan for the Murree-Kahúta forests in Ráwalpindi has been taken up by a special officer. Working plans.

189. Forest offences have increased to 9,956 from 9,250 last year, owing to more illicit grazing and felling. Fire cases decreased owing to the early rains in 1912. Powers of Forest Officers have been extended under sections 67 and 71 (*b*), (*c*), (*d*) of the Forest Act. The question of including fine as well as compensation for damage done in compounding for offences has been raised in Ráwalpindi and Kángra. In the former division, a half company of soldiers in two parties was stationed at Patriáta and Banni with Protection of forests.

salutary moral effect, and the punitive closures proposed on account of incendiarism were sanctioned and brought into force during the year. The department have started protective firing of chil forests in Murree, an experiment which is being watched with interest by officials and people alike.

Areas, which would otherwise have been closed, were thrown open to grazing, particularly in Ráwalpindi, but not on the whole to so great an extent as last year. The number of cattle impounded increased largely, owing to big seizures in the Lahore unclassed forests.

The question of abolishing rights of lopping blue pine in Kulu is being considered, with a view to checking the growth of fungus Trametes pini which is causing extensive damage.

Reproduction, natural and artificial.

190. The year was a good seed year for deodar and blue pine, but the autumn drought killed shisham and other seedlings in the plains. Coppice reproduction was generally good. In the Pabbi Reserve natural regeneration has been obstructed by drought, but the early rains of 1913 were favourable to sowing operations which were conducted on the trench and ridge system. On the irrigated plantation at Kot Lakhpat Rs. 17,903 was spent, and a revenue of Rs. 3,750 obtained from various sources. The canal supply is uncertain, and progress is not very satisfactory as yet. Eight miles of wire-fencing were completed and 281 acres sown up with shisham. Work was begun at Chichawatni plantation in Montgomery. Good progress is reported from the Sandhar forest in Kulu where 31 acres were sown with deodar, blue pine and fir.

Experiments.

191. The experiments at Chánga Mánga are being continued, and have given useful results. Observations of sample plots which have been maintained since 1909 have shown that the growth of coppice shoots from untrimmed stools is in no way inferior to that from trimmed stools. It is therefore proposed to abandon the practice of trimming the stools in Chánga Mánga in future. An enquiry into the causes of the failure of shisham seedling regeneration has been started, and in connection with the Forest Conference, into the failure of natural regeneration of deodar, which is of great importance in the hill forests. The eucalyptus seed at Simla was unfortunately destroyed by fire.

Resin.

192. Further efforts were made during the year to improve the quality of turpentine produced from chil resin with some success, as the introduction of a catch still at the suggestion of the Forest Chemist at the Forest Research Institute raised the quality very considerably. The latest pattern of distillery in use in France is about to be introduced into the Punjab, when it is anticipated that a quality of turpentine fully up to standard demanded by the Railways and other large consumers of turpentine will be produced. The experiments regarding the freshening period of the blazes made for the extraction of resin confirm last year's results and go to prove that a short freshening period is economically sound. Until methods have stood the test of time the resin industry will remain in departmental hands, particularly the tapping of trees.

Outturn.

193. The total outturn of timber for the year was 7,912,484 cubic feet as against 4,108,232 cubic feet during 1911-12, an increase of 3,804,252 cubic feet, which occurred in Ráwalpindi, Kulu and Bashahr Divisions. In Ráwalpindi arrear and advance sales of last year and next year were included and in Bashahr an adjustment was made of the royalty due from the Sutlej Forest Company on account of trees cut last year. In Kulu the increase was due to greater activity in carrying out improvement fellings and thinnings.

The total outturn of firewood was 16,013,229 cubic feet solid as compared with 16,404,152 cubic feet solid extracted in 1911-12, a decrease of 390,923 cubic feet, due to a smaller quantity of firewood being cut in Lahore Division where a large stock from the previous year's felling was on

hand. Of the total outturn of timber 26·55 per cent. came from Reserved Forests, 41·03 per cent. from Protected Forests, 3·47 per cent. from the Unclassed Forests and 28·95 per cent. from the Leased Forests. Of the firewood 27·41 per cent. came from Reserved Forests, 49·05 per cent. from Protected Forests, 8·95 per cent. from Unclassed Forests and 14·59 per cent. from Leased Forests. The total value of minor produce was Rs. 23,50,858 as compared with Rs. 23,45,242 in the previous year. Of the total 11·76 per cent. came from Reserved Forests, 50·43 per cent. from Protected Forests, 2·85 per cent. from Unclassed Forests and 34·96 per cent. from Leased Forests.

The policy pursued this year of selling marked trees standing resulted in a decrease by half in the amount of timber extracted by Government agency in Ráwalpindi, Kulu and Lahore.

194. The total imports were 5,103,283 cubic feet against 7,810,078 cubic feet in 1911-12 and 6,235,327 cubic feet, the average of the three previous years. The decrease occurred chiefly under deodar sleepers on the Chenab and Jhelum rivers. **Imports.**

195. The revenue rose by two lakhs from Rs. 10½ to Rs. 12½ lakhs: at the same time the expenditure only rose by Rs. 30,000 to Rs. 8,09,072. The larger revenue was mainly due to sale of deodar trees in Pálampur and trees obtained from improvement fellings in Kulu, and better sales of firewood and charcoal in Lahore. **Financial.**

Arboriculture.

196. The triennial report is not due till next year.

31.—Mines and Quarries.

197. There are 9 coal mines in the Punjab which come within the scope of the Indian Mines Act, 1 having been closed down during the year—5 in Jhelum producing 33,192 tons, and 2 each in Shahpur and Miánwáli turning out 3,617 and 1,600 tons: the output was 25·62 per cent. higher than last year. These mines are all over 20 feet deep and employ 981 persons on a daily average, 592 of whom are men working below, and 373 men, with 16 children, above ground. All the mines are non-mechanical. The four Government salt mines in Shahpur (1), Jhelum (2) and Miánwáli (1) are all worked by hand labour and produced 131,233 tons of rock salt or 6,630 tons more than last year: 970 persons are employed daily, of whom 50 only are men working above ground, and the rest work below—consist of 481 men, 365 women and 74 children. The only serious accidents in Punjab mines occurring in the year took place in these mines, nine people being injured, eight below ground and one above. There were no fatal accidents. The slate quarries have increased to ten, quarrying 7,991 tons of slate, and employing 701 persons: the limestone quarry in Hoshiárpur employs 72 people and turned out 45 tons: the Jhelum limestone is not ruled by the Act and 10,000 tons were produced, valued at Rs. 765. **Indian Mines Act.**

198. The Act does not apply to the following minerals which were produced:— **Other minerals.**

Gold (by washing), 147½ oz., value Rs. 8,741 an increase of Rs. 971.

Petroleum, 950 gallons (this has decreased from 1,400 gallons last year).

Alum, 5,546 cwt., value Rs. 39,405 a decrease of Rs. 2,475.

Gypsum, 1,837 tons, value Rs. 125.

Building stone, value Rs. 1,11,000 approximately.

Saltpetre, nearly Rs. nine lakhs, a rise of a lakh and a quarter.

The production of Mandi rock salt decreased: its value is reckoned at about ¾ ton and the Salt Range salt at nearly 9 tons to the £. Practically all the Indian output of alum comes from Miánwáli.

32.—Manufactures.

Factory Act.

Factories and employees.

199. The factories that came within the scope of the Act this year numbered 234 against 268 of last year, 26 factories having failed to work for the last two years. The 12 Delhi factories will be excluded from next year's report. The number of factories at work during this year was 208 or 11 more than last year (excluding Delhi).

The total number of operatives is returned as 32,865 or 4,681 more than in 1911. Of the increase 2,300 are accounted for in Government factories and 2,500 in cotton-ginning and pressing mills. Of the total number of operatives nearly 15,000 are employed in Government factories and 11,000 in cotton-ginning and other seasonal factories. Thus the permanent factory hands in private employ in the Punjab are (excluding Delhi city) only some 5,000 souls.

The number of women employed is 3,739 and the number of children 846. The number of women will probably increase now that they can be worked in ginning factories by night as well as by day ; and so will the number of children, as those working in the compounds of mills can under the new Act be kept at their tasks throughout the day and need not be certificated. Minor offences in the employment of women and children are common : illegal employment of such a kind as would be likely to endanger life or injure health is rare.

Inspections.

200. Of the factories working during the year 163 were inspected and 45 were not inspected. There has been some diffidence in making inspections owing to the absence of an expert inspector and the condemnation by the Factory Commission of amateur inspections. Inspections nearly always reveal a number of irregularities of all kinds. At the present time the irregularities are specially numerous, as few managers have taken any trouble to acquaint themselves with the new Act and rules. There were three prosecutions only. Government's previous sanction to a prosecution is now not required.

Sanitation.

201. There are good latrines in most factories ; but they are often not cleaned as regularly as they should be, and then they are not used. In many cases the pans are not replaced when they wear out, and this is a matter which requires constant attention. Waste water is seldom led away to any external drain, but is allowed to stagnate at the boundary of the factory precincts.

The general health of the operatives is good. Long continued work in a factory is not customary.

Wages.

202. Wages are generally higher in the factories than outside, and there is no complaint.

Fencing.

203. The fencing of machinery is usually adequate, but repairs and replacements are not carried out as promptly as they should be.

Accidents.

204. There were 264 accidents, 7 of which were fatal, 61 serious and 196 minor : this is normal : most of them occurred in the Railway workshops.

33.—Trade.

Internal rail and river-borne trade.

General.

205. This section deals with the trade of the Punjab and North-West Frontier Province with other provinces, as much as is carried by rail and river. The values are calculated by rates fixed for imports by other provinces and for exports by the statements received from the Municipal Committees of Delhi and Amritsar. The report this year deals with the triennial period from 1910-11 to 1912-13. The first year's harvests were normal, the monsoon of 1911 was disappointing, and the kharif poor, but a good rabi followed in 1912. The monsoon of 1912 was fitful but heavy and cotton and cane were good.

206. Prices were approximately normal in 1910-11, except in the case of cotton which touched a record figure: in 1911—13, however, prices ruled high all round, except cane which fell to normal at the close of the period. **Prices.**

207. Exclusive of animals and treasure the following table gives the totals of trade during the last two triennial periods :— **Volume of trade.**

		Exports.		Imports.	
		Maunds.	Value, Rs.	Maunds.	Value, Rs.
1907—1910	Total	132,838,574	69,04,09,249	122,235,931	75,17,76,105
	Average	44,279,525	23,01,36,416	40,745,310	25,05,92,035
1910—1913	Total	171,895,435	85,09,39,468	165,168,460	88,40,49,433
	Average	57,298,478	28,36,46,489	55,056,153	29,46,83,144
Total increase or decrease ...		+ 391	+ 1,605	+ 429	+ 1,323 lakhs

In 1912-13 exports amounted to 628 lakhs of maunds, 7 per cent. more than in 1911-12 and almost equal to the record trade year of 1907-08. Their value rose by 16 per cent. to Rs. 3,202 lakhs, the increased value per maund being due to a larger proportion of cotton and wheat in the exports. Imports in 1912-13 amounted to 671 lakhs of maunds as compared with 557 in 1911-12, which was the previous best year on record, and to Rs. 3,176 lakhs in value as compared with Rs. 3,001 lakhs.

208. Imported goods forming more than one per cent. of the total imports were— **Imports.**

Article.	Per cent.	Value in lakhs of rupees.	Article.	Per cent.	Value in lakhs of rupees.
Apparel ...	3	94·6	[Iron and steel ...	7·5]	...
Coal and coke ...	3·7	118·	Oils ...	1·9	61·6
Cotton ...	31·9	1,109·7	Oil-seeds ...	1·4	43·9
[Twine and yarn, Indian.	1·3	...	Provisions ...	2·7	88
Foreign piece goods	21	...	Railway stock ...	2·1	68·6
Indian piece-goods ...	10·]	...	Spices ...	1·3	40·4
Dyes and tans ...	1·5	50·6	Sugar ...	15·7	492·5
Gram and pulse ...	3·3	107·4	Wood ...	2·5	81·4
Hides and skins ...	1·5	49·4	Wool ...	1·7	54·6
Jute ...	4·7	149·6	Others ...	2·	73·6
Metals ...	8·1	288·			

Cotton has increased by Rs. 100 lakhs on last year, coal Rs. 54 lakhs, dyes Rs. 3·6, gram and pulse Rs. 9, hides Rs. 11, jute Rs. 43, oils Rs. 5·6, spices Rs. 2, sugar Rs. 122·5 lakhs.

The decreases have been in drugs Rs. 33 lakhs : metals Rs. 40½ : oil-seeds Rs. 10, provisions Rs. 8½, railway plant Rs. 20·4, tobacco Rs. 7, wood Rs. 8, and wool Rs. 24 lakhs.

Imports of coal and coke nearly doubled during the triennium, owing to the industrial development of the Punjab and the fall in the price of coal: the increase on last year is all under the head "for other than railway purposes." Foreign piece-goods have risen by Rs. 372 lakhs during the three years under review, Indian piece-goods by Rs. 220 lakhs, and Indian yarn by Rs. 55 lakhs. The net increase of metals imported has been 38 lakhs of maunds, most of which went to Delhi and the Canal Colonies for building purposes. Kerosine oil fluctuated owing to a rate war, but finished with an increase of 3½ lakhs of maunds and Rs. 29 lakhs in value for the triennium. Owing to better cotton harvests oil-seeds have decreased, but imported sugar has increased with the growing prosperity and the decrease in the production of cane.

Treasure.

209. Nearly the whole of the imports of treasure was in sovereigns, and the increase of imported gold for the triennium amounts to no less than Rs. 489 lakhs. During the same period net imports of silver coins decreased by Rs. 280 lakhs and of silver bullion by Rs. 100 lakhs. In addition to taking Rs. 331 lakhs more of imports than the exports, the Punjab absorbed Rs. 1,000 lakhs of treasure during the triennium.

Exports.

210. The more important exports show the following percentages of the total :—

Article.	Per cent.	Value in rupees, lakhs.	Article.	Per cent.	Value in rupees, lakhs.
Apparel ...	2·4	76	Oil-seeds ...	8·5	274·3
Cotton ...	22·5	720·9	Provisions ...	1·1	38
Grain and pulse ...	45·9	1,471·6	Railway plant ...	1·1	37·3
Hides ...	5·5	176	Wool ...	2·2	64·8
Metals ...	2·6	66	Others ...	1	39

Raw cotton forms 83 per cent. of the cotton exports, and wheat 64·4 per cent. of the grain and pulse, while nearly all the oil-seeds are rape and mustard.

Increases—Cotton Rs. 315 lakhs, grain and pulse Rs. 23·6 lakhs, hides Rs. 49·5 lakhs, metals Rs. 8, oil-seeds Rs. 11, provisions Rs. 10, and railway plant Rs. 2·8 lakhs. Wheat and wheat flour rose to 323 lakhs of maunds, which is a record figure. The exports of wheat, for which there is a constant world demand, closely follow the character of the harvest, but the exports of gram and barley depend on a variety of conditions. Gram fell from 137 lakhs of maunds last year to 61 lakhs, though the crop was hardly inferior. Barley rose from 14 lakhs of maunds in 1910-11 to 73 lakhs this year, owing to the sudden demand abroad. India now holds the second place as a barley shipper to the United Kingdom, and the great bulk of this advantage has gone to the tracts east of the Sutlej, and must have substantially benefited poor districts such as Hissar, Gurgaon, and Rohtak. The value of exported cotton has increased during the triennium by Rs. 467 lakhs, hides by Rs. 118 lakhs, oil-seeds by Rs. 369 lakhs, wool by Rs. 60 lakhs.

Decreases—As a result of the decrease in the production of cane, exports of sugar have declined by Rs. 3½ lakhs in value. Salt has increased by 6½ lakhs of maunds, but decreased in value by Rs. 7 lakhs. A large export of salt to the United Provinces has sprung up owing to a reduction of freights.

River traffic.

211. Exports by the river Indus decreased from 23 lakhs of maunds in 1911-12 to 16 lakhs in 1912-13, but the total exports for the triennium rose from 55 to 59 lakhs of maunds. As usual, exports consisted almost exclusively of raw cotton, grain, oil-seeds and timber. Imports in 1912-13

amounted to 2½ lakhs of maunds, or much the same as in 1911-12 and a little more than in 1910-11. The import trade varies very little, and has so far failed to attract to itself the bulky goods, which are brought into the province by rail from Karachi.

Distribution of trade.

212. Karachi now takes 61 per cent. of the Punjab exports (calculated on their value) as compared with 58 per cent. when the last triennial report was written. Exports to the United Provinces continue to decline, amounting to 12 per cent. in 1912-13 against 26 per cent. in 1908-09. Imports from Karachi have decreased from 39 per cent. in 1909-10 to 36 per cent. in 1912-13; imports from Bombay Port are steady at 15 per cent. and from Calcutta decreased from 10 to 8 per cent., while the United Provinces now send us 21 per cent. of our imports, as compared with 18 per cent. in 1909-10. The feature of the distribution of trade between the various blocks within the province is the large increase in exports from the cis-Sutlej tract, which, probably for the first time since the Canal Colonies were fully developed, exported more than the tract between the Sutlej and the Jhelum. This change is due to the European demand for barley and gram, referred to above.

Trade with Trans-Frontier Countries.

General.

213. This section deals with the triennium 1910-11 to 1912-13, and tables have been compiled showing the figures for imports and exports for the last three triennia. From these it appears that the imports have totalled Rs. 27, 13·4, and 17·7 lakhs, and exports Rs. 8·8, 4·7 and 8·2 lakhs, for the three periods respectively. But statistical changes and errors have affected the returns, and also the establishment of two new trade posts in Lahul and Bashahr.

Trade with Afghanistan.

214. Fluctuations in the trade with Afghánistán appear to be somewhat fortuitous. But higher prices in the Punjab appear to have stimulated the import of all commodities, and especially of *ghi*, hides and wool. "Other fruits," the chief import, have increased by only 3 per cent. in weight, but by 186 per cent. in value, owing to valuable consignments of pomegranates and pistachio nuts in the winter of 1910-11. Leather shoes, rice, cotton piece-goods, iron and sugar are the chief exports and these have all increased largely for the triennium, but neither leather nor piece-goods figure in the returns for 1911-12. The imports for the last three triennia are returned at Rs. 94, 44·9 and 195 lakhs, respectively, and the exports for the same periods at Rs. 247, 49, and 229 lakhs. But comparison cannot be accurate owing to causes mentioned in the preceding paragraph.

Trade with Ladakh.

215. The trade with Ladakh is almost entirely confined to the Kulu route, as, although the bridge at Dankar has been repaired, the approach to it on one side is almost impassable for loaded animals, and so the Spiti route from Simla is not used. Only the last two triennia can be satisfactorily compared:—

Imports.

Goods.	1907-10.	1910-13.
	Rs.	Rs.
Horses and ponies	26,895	46,844
Charas	3,04,300	4,85,520
Raw wool	6,865	40,050
Borax	23,548	3,451
Raw silk	1,77,760	1,04,400

The import of charas is steady in spite of the enhanced duty: the increase of raw wool is due partly to the opening of another trade registration post at Patseo and partly to excess of demand over supply. The trade in borax has declined owing to over-stocking of markets. Silk prefers the Kashmír route.

Exports.

Goods.	1907—1910.	1910—1913.
	Rs.	Rs.
Cotton piece-goods (European)	1,49,800	2,07,790
Ditto Indian	20,280	39,850
Indian Tea	58,000	95,820
Coral	25,278	14,203

The increase in European piece-goods is in value rather than in weight: these goods go *vid* Kashmír preferably and thence through Leh to Central Asia, while Indian piece-goods stop at Leh. Indian tea exports are improving, and it is probable that Kángra tea-planters will be able to supply a quality of tea that will successfully compete with Chinese brick tea. Coral improved at the end of the triennium.

Trade with Tibet.

216. Imports of raw wool have gone up from Rs. 5·9 lakhs to Rs. 7·4 and of salt from Rs. 7,482 to Rs. 25,192, while borax has declined as in the Ladakh trade. In the period under report the export of silver increased by Rs. 1,92,720, European cotton piece-goods by Rs. 9,785 though the weight decreased, Indian piece-goods declined by Rs. 4,140 in price and also in weight by 78 maunds. Brass and copper shew a vigorous rise from Rs. 7,732 to Rs. 25,085, husked rice from Rs. 2,845 to Rs. 18,039, precious stones from Rs. 6,100 to Rs. 12,720, manufactured silk from Rs. 1,980 to Rs. 11,000, while Indian tea declined in value by about Rs. 2,000. Nearly all the export trade with Chinese Tibet is carried on by the Tashigong and Shipki routes and very little by Kulu. Much of the grain and other articles which pass the Nachar post are consumed in Kanawar and do not go on into Tibet. But there has been a real rise in exports, owing to high prices obtained by traders for wool enabling them to take more piece-goods, metal vessels and other articles of Indian manufacture. Trade has to contend here with illegal dues levied by Tibetan civil and religious officials.

It has been decided to retain the posts at Patseo and Sangla Dogris for another year in order to give them a full trial: the question of abolishing the Sultánpur post was still under reference at the end of the year.

Joint Stock Companies.

Number of Companies.

217. The following abstract shows the number of companies working at the end of this and last year:—

	COMPANIES DIVIDED INTO SHARES.				COMPANIES LIMITED BY GUARANTEE OR POSSESSING NO PAID UP CAPITAL.	
		CAPITAL.				
			Issued.			
	Number of Companies.	Nominal.	Nominal.	Paid up.	Number of Companies.	Number of members.
		Rs.	Rs.	Rs.		
March 1912	194	6,21,31,940	2,92,26,680	1,93,46,130	23	3,387
March 1913	155	6,35,66,940	2,57,11,100	1,67,13,925	23	3,055

Twenty-three new companies were registered, while 44 went into liquidation. Eighteen have been transferred to the register of the Delhi Province.

The majority of the newly registered companies are trading and manufacturing concerns of various sorts. Seven are banking companies, of which 3 started in Lahore and 2 in Multán appear to be superfluous. The latter city is obtaining an unenviable reputation as a home of shady finance.

Of the 44 companies which have ceased working 27 (or more than half) are of the dishonest type of provident fund referred to in last year's report. The Provident Insurance Societies Act has been successful in dealing a death-blow at these miserable concerns. Of the remaining 17 companies, which have come to an end, 2 are banks, 3 mills and 10 miscellaneous trading companies. The fact that more than 20 per cent. of the companies in existence in a year of fair harvests should be obliged to cease work would seem to show that business knowledge or methods in this province are in need of considerable improvement.

Capital.

218. The difference in the figures under the head of "Capital" from those of last year are due largely to the formation of the Delhi Province. One bank has increased its nominal capital by 48 lakhs, of which sum Rs. 3,087 have been paid up. It is more satisfactory to note that the paid-up capital of the province (excluding the Delhi companies) has increased by six lakhs. The percentage of paid-up to nominal capital is still, however, only 26, and the figure would be considerably lower if one or two long established banks with fully paid-up capital were excluded from the list.

Miscellaneous.

219. Ten new societies were registered under Act XXI of 1860. Five of these are "gaushalas."

Methods of business.

220. The provident societies, to which reference has been made above, require separate mention: 17 (including 1 not registered under the Indian Companies Act) now remain, of which 4 have apparently ceased to do any business at all. One has discontinued its provident fund after March 31st and has taken up other work; 7 come under the Indian Life Assurance Act (VI of 1912); 3 have been registered under the Provident Insurance Societies Act (V of 1912) and 2 are in process of becoming so registered. Those funds whose large scope of business brings them under Act VI instead of under Act V are not necessarily of a more reputable character, and it will be necessary to see that these larger concerns are not given more latitude under the former Act than they would receive under the latter.

Three prosecutions for non-submission of documents by the proper date were instituted during the year. In one case the prosecution was withdrawn on the directors offering a satisfactory explanation. The other two cases are still pending.

Since the close of the year under report the failure of several Punjab banks has given point to the remarks of the Registrar of Joint Stock Companies regarding business knowledge and methods in the province. Now that the methods employed by the directors of the liquidated concerns have become common knowledge, the shareholders and policy-holders will perhaps take steps to guard their own interests in future; some stricter supervision on the part of Government may also be looked for when the new Act comes into force.

34.—Buildings and Roads.

General.

Administrative changes.

221. The Imperial Sub-division, Simla, was transferred to the Government of India and in its place No. 3 Sub-division, Simla, was formed for the construction of the Imperial Legislative Council Chamber and other works. The re-organised Jullundur Division was transferred to the 2nd Circle, and on the exclusion of Delhi Tahsil and one thana of Ballabgarh

Tahsil, a new Gurgaon Division was formed, comprising the newly organized Gurgaon and Rohtak Districts, and Hissar. The Multán Division was transferred from the 3rd to the 2nd Circle and the King Edward Memorial Division to the 3rd Circle.

Valuation of buildings.

222. The capital cost of the Imperial buildings in charge of the Department was Rs. 39·3 lakhs which were maintained at a cost of little over half a lakh. Provincial buildings of a capital value of Rs. 310·8 lakhs were maintained at a cost of Rs. 4·4 lakhs. The Provincial buildings for which capital and revenue accounts are kept are valued at Rs. 11·76 lakhs and cost Rs. 19,392 to maintain. The percentage of cost of establishment on expenditure was in the case of Imperial Military Works 16·78 per cent., for Imperial Civil Works 17·43 per cent., and for Provincial Works 15·54 per cent.

Total outlay.

223. The total expenditure by the Department on Public Works amounted to Rs. 79·65 lakhs, distributed over Imperial Military Works Rs. 62,903, Imperial Civil Works nearly Rs. 2 lakhs, Provincial Civil Works Rs. 59·3 lakhs and contribution works Rs. 17·7 lakhs.

Imperial Works.

Military.

224. The total outlay was only Rs. 15,750, of which Rs. 1,141 was under "special" demands and Rs. 37,336 on repairs. A godown and two sheds at Sargodha, stallion stables in Chak No. 57 and two supply houses in Kángra District were completed.

Civil.

225. The total outlay on original works was Rs. 3·1 lakhs and on repairs nearly half a lakh. Finished works include a post and telegraph office, offices for the Viceroy's Private Secretary, and improvements to the European Clerks' Cottages at Simla: a grain godown at Hissar Cattle Farm: and improvements in the post and telegraph offices at Lahore. Work was begun on the Anglican Church at Lyallpur and continued on the Imperial Council Chamber and at Courteen Hall, Simla.

Famine Relief.

No expenditure.

226. There was again happily no expenditure on Famine Relief.

Provincial Works.

Total outlay.

227. Owing to the flourishing state of the Provincial finances a larger grant was received for Provincial Public Works Expenditure than in the previous year and the budget grant of Rs. 57·98 lakhs of 1911-12 was consequently increased to Rs. 78 lakhs, of which, however, it was not possible to spend more than Rs 59·31 lakhs, Rs. 50 lakhs of which was incurred on works and repairs, and the rest on tools, plant and establishment.

Civil Buildings.

Outlay.

228. The outlay was Rs. 22·3 lakhs on original works and 3·18 lakhs on repairs. The former was distributed as follows:—Forests Rs. 15,000, Administration Rs. 3·15 lakhs, Archæology Rs. 29,000, Education Rs. 5 lakhs, Law and Justice nearly a lakh, Jails 2¾ lakhs, Police nearly 3 lakhs, Medical 4½ lakhs and Miscellaneous 2·4 lakhs.

Works completed.

229. A house at Kálka was purchased for the Naib Tahsildar's court and residence: and three residences built at Dharmsála and Jullundur: the record-room at Dera Gházi Khan was completed and additions to similar buildings at Ludhiána, Hissar and Ambála: also courts at Hoshiárpur, Montgomery and Jhelum (two). Works were executed for the Archæological Department in Delhi Fort and in connection with mosques and gardens in Delhi and Lahore. The High School, Campbellpur, the main college building at Rasúl, and Queen Mary's College, Lahore, were completed, together with the subsidiary jail at Dera Gházi Khan, 11 police stations and 9 rest-houses in various

districts, police lines and barracks at Dera Gházi Khan, Montgomery and Rohtak, the police parade ground at Dharmsála, the Leper Asylum, Sabáthu, special repairs to the Lunatic Asylum, Lahore, and to "Ellerslie", Simla. In addition, land was acquired in Lahore for the Government Press, the combined offices of the Directors of Land Records, Fisheries, Agriculture and Industries, and the Registrar, Co-operative Societies, Punjab, and at Siálkot for the High School.

Progress was made with the following works:—the Deputy Commissioner's Court and the tahsíl at Dera Gházi Khan, quarters for Professors and Agricultural Assistants at Lyallpur, the agricultural station at Gurdáspur, a rest-house at Taxila for the Director of Archæology, High Schools at Dharmsála and Gujrát, out-houses and workshop for the Mayo School of Arts, Lahore, the Kacheri at Jhang, subsidiary jails at Amritsar and Lower Dharmsála, the Borstal Central Jail, the King Edward Memorial Scheme and the Vaccine Institute at Lahore, the dispensary and Civil Surgeon's office and residence at Dharmsála, one police station and 13 civil rest-houses.

Communications.

Roads.

230. The outlay on works amounted to Rs. 5½ lakhs, more than twice as much as in 1911-12, and on repairs to Rs. 11½ lakhs. Thirty-six miles of feeder roads were completed, comprising the Ladwa-Abdullapur road (Rs. 1,08,184), the road from Nalagarh State boundary to Beli and on to Rúpar (Rs 36,223) and the Tibri-Beas road in Gurdáspur (Rs. 44,185): a part of the Grand Trunk Road at Ludhiána was raised. The maintenance of 1,083 miles of Provincial metalled roads by the Department cost Rs. 740 per mile, and that of 152 miles by District Boards Rs. 694 per mile. District Boards spent Rs. 420 per mile on their own metalled roads, 1,358 miles in length. On unmetalled Provincial roads the Department spent Rs. 129 per mile on 743 miles and District Boards Rs. 16 per mile on 1,032 miles. On 19,112 miles of unmetalled District Boards roads the Boards spent Rs. 7 per mile.

Boat Bridges.

231. Boat bridges were kept up at Shahdara over the Ravi and at Wazírabad over the Phalku Nala throughout the year and for the cold weather months at Khusháb and Dera Gházi Khan over the Jhelum and Indus rivers respectively.

Miscellaneous Public Improvements.

Outlay.

232. Miscellaneous expenditure charged to Provincial amounted to Rs. 6 89 lakhs for works and nearly a lakh for repairs, and that charged to Municipal and Loans amounted to Rs. 89,560 for works and Rs. 5,819 for repairs.

Simla.

233. The Simla Hydro-Electric scheme made very good progress and is being pushed on to completion vigorously. The reservoir, power house, and head stock chamber were completed during the year and the remaining transmission lines and the distributing mains were practically finished by the end of March 1913. For the Simla water-supply extension scheme the pumping station, tank, weirs, etc., have been constructed and one Jewell filter and two rising mains are nearing completion The erection of the electrical equipment for pumping purposes is in hand. The scheme has been added to by the laying of mains for the supply of water to the Retreat and Mashobra bazar.

The Nammal Dam.

234. The masonry dam in Nammal Gorge which was begun in October 1911 and the canal in connection with it was in progress and completed after the close of the year; it is the first large masonry dam of any considerable height constructed in the Province.

Municipalities.

235. At Tandliánwála a temporary water-supply was completed, also a sarai and metalling of roads and brick pavement in the market. Dera Gházi Khan was provided with a water-supply and irrigation, Jaranwála with a water-supply and drainage and Chuhar Kána with drainage. The extension of the water-supply at Dharmsala was in progress.

Delhi.

236. Three lakhs were spent on adapting the Circuit House at Delhi as a residence for the Viceroy.

Contribution Works.

Outlay and Works.

237. The total outlay was Rs. 15·39 lakhs, which was chiefly spent on renewing stallion stables at Lyallpur and Bhalwal, improving and metalling roads and drainage at Chiniot, Hazro and Lyallpur, water-supply at Lyallpur, Toba Tek Singh and Lower Dharmsála, extension of the Punjab University buildings, constructing a temple and dharamsala at the Aitchison College and improvements to Nur Jahan's tomb at Shahdara and the police station at Batála.

Assistance to Local Bodies.

238. In addition Local Bodies were assisted by the preparation of projects for them aggregating Rs. 17·7 lakhs and projects aggregating Rs. 19·8 lakhs were scrutinised: the works in most of these cases will be done by the Department.

34-A.—Railways and Tramway.

Railways.

New lines.

239. On the North-Western Railway the doubling of the Lahore-Raewind section of 24 miles was completed, and that from Rohri to Janori of 1½ miles. The sanctioned extensions are those from Jakhal to Hissar, Sarai Kála to Havelián, Jullundur to Hoshiárpur, Ambála to Saháranpur (second line), in all 158 miles: work was done on all these sections during the year. The remodelling of Lodhrán station was completed, and the doubling of the new Beas bridge carried on. By the same agency the Jullundur Doáb Railway, 28 miles, was opened. The Southern Punjab Railway, which is worked by the North-Western Railway, also obtained a contract for the construction of 105 miles of railway from Sultánpur to Ferozepore, Lohian to Phillaur and Jullundur to Nakodar.

Statistics.

240. The mileage of the North-Western Railway is now 4,903, train mileage has increased by one million to 22·8 millions: the capital outlay is now £56 millions (Rs. 8,407 lakhs) and the net earnings have increased by Rs. 129 lakhs to Rs. 489 lakhs giving a return of 5·77 per cent. on the capital outlay as against 4·38 last year. The "military" part of the system showed a deficit of Rs. 9,000 on the year's working. Of the increase of Rs. 637 lakhs on the gross earnings of Indian railways, the North-Western Railway accounted for Rs. 126½ lakhs or 19·86 per cent., and of the increase in the goods earnings, Rs. 132 lakhs or 26½ per cent., chiefly by grain and pulse and raw cotton for export.

Tramways.

241. The Delhi tramways disappeared this year from the Punjab returns. The Jagádhri light railway paid 1·54 per cent. on the capital, earning Rs. 2,000 net.

Accidents.

242. A collision between a goods and a ballast train occurred at Attock, fifteen coolies being injured, two of whom died. The driver lost control of the train and ran past signals.

35.—Irrigation.

General.

General results.

243. In the year under report the total area irrigated in British districts and Native States by canals in charge of the department was 8,429,381 acres as against 7,548,515 acres which was the average of the last three years: in addition 65,110 acres were watered from the Western Jumna Canal in Jínd State by the State authorities (an advance of some 2,500 acres on last year's figure), and 2,300 acres from the Butana Canal. The weather conditions of the year are described in section 28, and the general conditions of each canal will be found noted below.

On the eight Major Canals a capital outlay, direct and indirect, of Rs. 28½ lakhs was expended, bringing up the total cost of these works to Rs. 1,463 lakhs, and the net profit after paying interest amounts to Rs. 192 lakhs, or 13·1 per cent., on the capital expenditure to the end of the year.

On the two Minor Canals, for which capital accounts are kept, the total capital cost is now nearly Rs. 6 lakhs, upon which a net loss of Rs. 8,000 was experienced. Including these canals the net profit from all Imperial Minor Canals (which are not classed as productive) was Rs. 7·8 lakhs.

On the two Provincial Canals there was a balance profit of Rs. 15,301 against an almost equal loss last year.

On the canals of the Triple Project Rs. 125 lakhs were spent during the year, bringing the total capital outlay at the end of the year to Rs. 775·4 lakhs. The maintenance charges of the Upper Chenab Canal just exceeded receipts at Rs. 1⅘ lakhs, while the interest on the total capital outlay of the project amounted to Rs. 24·4 lakhs against Rs. 19 lakhs last year.

The gross Imperial Capital now invested in the Punjab Canals is Rs. 1,949 lakhs, or practically £13 millions sterling as against £12 millions, which is the figure for last year.

Major Works—Canals in operation.

Western Jumna Canal.

244. The year was a satisfactory one for the Western Jumna Canal. The total irrigation amounted to 822,341 acres, including 71,865 acres, watered by the Sirsa Branch in the Patiála State, and in addition to 67,410 acres in Jínd by two other branches. The area watered during Kharif 1912 was actually smaller than that of the year before owing to low supply in the river. But the monsoon being late crops were sown and matured with canal water, and after the good late summer and autumn rains a large *barani* area was sown for the *rabi*. The winter rains failed just when the canal supply ran short, and the large crops were only saved by rains in February. Canal water was utilised to the utmost, and the area of irrigated *rabi* was greater than in any year since 1895-96. Village tanks were kept filled in the hot weather without charge. The area remitted amounted to 3,410 acres during kharif, of which 2,515 acres of cane and cotton were destroyed by grass-hoppers and blight and 941 acres during *rabi*, owing to short supply in the river and hail. The Imperial average net profit of the previous triennium was 3·7 per cent.; this year it was 6·98 per cent. The gross revenue was Rs. 29½ lakhs and the working expenses Rs. 11½ lakhs. The net revenue received by the Patiála State on the Sirsa Branch amounted to Rs. 1½ lakhs, representing 13·45 per cent. net profit, against 9 per cent., the average of the preceding triennium. The increases are due to increase of irrigation. The Jínd Branches show a profit of Rs. 88,747 against Rs. 1,12,153 last year. The number of boats plying on the canal has again decreased to 23, but the profits of navigation increased to half a lakh owing to a large call for timber. The total value of all crops after paying water-rates is estimated at Rs. 38 per acre assessed, and in addition large areas of cane and other food

crops are grown on percolation without paying rates. It has been decided to increase the permissible irrigation to 33 per cent. of the culturable commanded area on all channels at present designed for less. This entails the overhauling of practically every channel on this canal. Surveys are in hand for remodelling the Delhi and Butána Branches, and a second large silting reach has been begun on the main line. Extensive fruit gardens were laid out, being found to give large returns.

Sirhind Canal.

245. On the Sirhind Canal the total irrigated area amounted to 1,476,782 acres, an advance of 33 and 35·7 per cent., respectively, on the averages of the two previous triennia. Last year a quantity of *barani* cultivation was brought under the canal owing to failure of rainfall, and the results are seen in the record collections during the year under report: at the same time this year's irrigated area is the second highest on record. The navigation traffic increased by 4,000 tons to 29,000 tons, valued at Rs. 10·4 lakhs. The net revenue earned on the British Branches amounted to Rs. 35,41,098, equivalent to 14 per cent. on the capital invested, a figure which has never before been attained to on this Canal. On the Native States Branches the collections came to Rs. 24·3 lakhs or Rs. 7½ lakhs more than in the previous year, while the assessment fell by 1·7 lakhs to Rs. 22·8 lakhs: the profit was 11·7 per cent. by collection and 10·09 per cent. by assessment on the total capital outlay to end of the year, the corresponding figures for the previous year being 7·31 and 12·8 per cent., respectively.

The canal *rabi* supply was found insufficient to meet the keen demand. Rotational closures of distributaries and outlets had to be resorted to and the prospects of the standing crops at one time looked gloomy. The rains after the middle of February, however, were just in time to save the situation, and helped greatly in maturing the crops. There were no marked calamities and crops were good.

Expenditure was concentrated chiefly on lining certain lengths of the canal to prevent excessive percolation, on buildings, bridges, and on remodelling distributaries and constructing silting reaches on the Abohar Branch.

The projected schemes on this canal include an extension of 420,000 acres of irrigation in Sirsa Tahsil at a cost of Rs. 20½ lakhs, the construction of the Naila Dam to cost Rs 260·75 lakhs for supplying *rabi* water to the same tract, and the waterproofing of the channel at a cost of Rs. 10 lakhs.

Upper Bari Doab Canal.

246. The heavy outturn of work at the Central Workshops, in connection with the Balloki Barrage on the Lower Bari Doab Canal, resulted in a reduction of capital outlay debited to the Upper Bari Doab Canal by Rs. 2⅓ lakhs. The work done included sluice-gates, iron superstructure, lifting machinery and iron road bridge for the Balloki level crossing, which has 35 openings, each of 40 feet span, and other machinery for the Suketar level crossing of the Upper Jhelum Canal. The capital expenditure on the Upper Bari Doab Canal was mainly devoted to remodelling distributaries and lining channels: in addition 3½ lakhs were spent on extensions and improvements, including the construction of two new minors: the main water-courses in Lahore will all eventually be lined with masonry. Maintenance expenses totalled Rs. 6·28 lakhs.

The area irrigated was a record one both for the year and for the *kharif* harvest, amounting to ½ million acres for the latter and 1,170,716 acres for the whole year. The net income was Rs. 28·8 lakhs, bringing in a return of 13·58 per cent. Further water-proofing of the canal is contemplated, with re-alignment of distributaries, new gates to Madhopur under-sluices, a head regulator and other improvements for the Shah Nahr Canal, new offices at Amritsar, and the Amritsar Hydro-Electric Scheme.

Lower Jhelum Canal.

247. The area irrigated by the Lower Chenab Canal shows a decrease of 93,887 acres compared with last year's figure : this was due to short supply in the river and absence of rainfall at the time of sowing rabi crops; there was practically no rain from October to January. In all 2,240,203 acres were irrigated, one-third in the *kharif* and two-thirds in the *rabi*.

The net revenue of the year amounted to Rs. 1,21,14,426, equivalent to a percentage of 29·18 on the capital invested (Rs. 3,09,18,169) to end of the year. In the previous year the figures were Rs. 1,02,78,146 and 34·06, respectively.

The accumulated net profits have increased from Rs. 6,71,13,061 to Rs. 7,81,84,068, against Rs 3,09,18,170, the capital invested at the close of the year, or, in other words, these profits now exceed the cost of the canal by Rs. 4,72,65,899.

The increase of Rs. 1,13,891 in the assessment of water rate as compared with the last year is due to the judicious distribution of supply and to the consequent reduction in the area remitted. The heavy decrease of Rs. 3,69,973 in the assessment of owner's rate was due to the abolition of the rates in the villages recently reassessed and the corresponding increase in assessment of land revenue was due to the imposition of the new rates in these villages.

Lower Chenab Canal.

248. The irrigated area on the Lower Jhelum Canal amounted to 804,361 acres, an increase of 4,712 acres on last year, while the assessed area was 783,645 acres, which is 87,250 acres more than last year.

The area remitted on account of failed crops was 20,716 acres (10,746 during *kharif* and 9,970 during *rabi*) which included 4,168 acres remitted under tenancy rules. The area remitted last year was 102,154 acres.

The increase in the areas irrigated and assessed was due to favourable weather, non-appearance of the boll-worm which in the previous triennium caused considerable damage to the cotton crop, and consequently to a reduction in the area remitted.

The rainfall was good on the whole, though nearly all the rain fell in July, August, February and March. The supply in the canal was sufficient, and no rotational closure had to be enforced. On the branches, 36,658 acres were allotted.

The gross actual receipts, direct and indirect, came to Rs. 42,19,176 and the working expenses to Rs. 10,11,377, showing a net revenue of Rs. 32,07,799 or 20·09 per cent. on the capital outlay to end of the year, as against 10·91 per cent., which was the average for the three years ending 1911-12 : deducting interest charges, the profits of the canal were 16·65 and 7·68 for this year and the triennial average preceding. The recovery from the cultivators of the cost of constructing water-courses reduced the capital outlay by Rs. 2 lakhs : expenditure was largely connected with the Rasul Weir and pitching the canal with bricks. Occupiers' rates increased by about Rs. 4½ lakhs on the preceding triennial average : this is the result of favourable weather and low remissions : indirect receipts rose by Rs. 10¾ lakhs owing to enhanced rates for land revenue and *malikana*. The remodelling of the Head Regulator and the main canal will be necessary in about two years' time when the rotational supply system in conjunction with the Triple Project comes into force : the construction of reservoirs in two torrents for conserving a part of the monsoon flow-off to be used in the winter is also contemplated.

Upper Sutlej Inundation Canals.

249. The Upper Sutlej Inundation Canals irrigated 332,229 acres against 336,575 and 295,123, the averages of the triennia ending 1909 and 1912, respectively.

The matured areas amounted to 134,625 acres in *kharif*, 173,642 in *rabi*, total 308,267, against an average of 110,252 *kharif*, 155,745 *rabi*, total 265,997, of the previous triennium. The general increase is due to better condition of the river and the canals. The failed area of the year was 23,962 acres against 30,810 of the previous year.

The gross income, direct and indirect, totalled Rs. 5,10,165, against an average of Rs. 6,07,155 in the previous triennium. After allowing for working expenses, which amounted to Rs. 4,09,216, the net income was Rs. 1,00,949, against Rs. 2,60,797, of the previous year. The decrease was due to short *rabi* sowings in the autumn of 1912, the river in the flood season of 1911 having been unusually unfavourable. The expenditure was chiefly on construction of buildings, the new head reach of the Upper Sohag Canal, and remodelling of distributaries.

Sidhnai Canals.

250. On the Sidhnai Inundation Canals, including the Koranga, Fazil Shah and Abdul Hakim Subsidiary Canals, the early *kharif* sowings were restricted by the irregular and insufficient supply in the canal up to the middle of July when the monsoon arrived. The canal failed totally in November, and altogether the water was flowing for 80 days less than last year, with the result that 29 per cent. of the *kharif* and 17 per cent. of the *rabi* crops failed. There are not enough wells in the tract, and there was a failure of rain which is usually counted on to supplement the canal supply. The net revenue Rs. 3·8 lakhs or 28·6 per cent. on the capital outlay, against 37·8 per cent. last year.

Indus Inundation Canals.

251. The area irrigated by the Indus inundation canals was below that of the average of the two previous triennia, owing to low supply in the river. The net profits amounted to 3·12 per cent. against 4·96 last year, due to decrease in irrigation. Money was spent chiefly on the usual annual repairs and silt clearances and on buildings at Chorutta and Rájanpur.

Upper Chenab Canal.

252. Irrigation was begun on the Upper Chenab Canal a year earlier than was anticipated in the project. The canal remained open with short closures for silt scouring until October 18th, when the entire river supply was required for the Lower Chenab Canal: 116,162 acres were irrigated, 54 per cent. of which was watered in the *kharif* and 46 per cent. in the *rabi*. In addition 30,525 acres were irrigated by water escaped into the Deg Nullah on the Main Line Lower. Rupees 23 lakhs were spent on the canal, bringing the total cost up to 295·3 lakhs: the revenue realised fell nearly Rs. 6,000 short of the expenditure which was connected with ordinary maintenance. The Main Line is complete, and so is the Main Lower except the Tail Fall. The Raya Branch was in progress as far as mile 35: work on the Nokhar Branch is being resumed after decision of certain technical points.

Upper Jhelum Canal.

253. A description of the scope and main features of the Upper Jhelum Canal was given in last year's Administration Report. The progress made during the year under review was most satisfactory, and it is hoped that the canal will be opened in time for the *rabi* crop of 1914-15. All Main Line works with the exception of the Mangla Regulator, the great Mangla cutting, the Tail Fall and Gujrát Branch Head Regulator were either completed or nearing completion at the end of the year. Direct charges of Rs. 56 lakhs brought the total direct charges outlay from the commencement of operations to Rs. 308 lakhs.

Lower Bari Doab Canal.

254. A general description of the Lower Bari Doab Canal was given last year. The revised estimate of the cost of the canal is Rs. 216·7 lakhs and the expenditure up to the end of the year under report was Rs. 163·25 lakhs. It is confidently expected that the canal will be completed well within the revised estimate. The river has taken to the new channel cut for it more readily than was expected, and the right flood embankment on the old bed of the river, just above the headworks, was constructed on dry ground. On the level crossing itself the steel work erected under the supervision of the

Superintendent, Central Canal Workshops, was sufficiently far advanced to enable the river to be controlled by the end of the year. The rectangular demarcation of the land commanded by the canal was completed and a Colonization Officer was appointed during the year to the tracts which would be irrigated during the monsoon of 1913. The canal was formally opened by the Lieutenant-Governor on April 12th, 1913, just after the close of the year under report.

Imperial Minor Works with Capital Accounts.

Shahpur Imperial Canals.

255. The demand for water on the Shahpur Canal was keen and the supply adequate; 2,451 acres failed owing to shortage of water-supply against 4,620 acres in the previous year. The area irrigated amounted to 40,954 against 32,084, the average for the last triennium: the assessed area was 38,448 acres against 27,673 acres. Nearly half a lakh was spent on ordinary, maintenance, silt clearances, and two bridges, and the net revenue was accordingly only half the average of the preceding triennium, namely, Rs. 18,153, giving 8·41 per cent. profit on capital.

Ghaggar Canals.

256. The area irrigated by the Ghaggar Canals was 48,531 acres, the second largest area on record, and included 7,179 acres in Bikáner which received no irrigation last year. There was, however, a loss of Rs. 26,104 or 6·94 per cent. on the capital outlay, against Rs. 13,948 loss last year. The Bikáner State profited to the extent of Rs. 6,853, against a loss of Rs. 9,101 last year.

The figures for the year under report include 10,297 acres in *kharif* and 4,615 acres in *rabi* in the fluctuating area, and 6,106 acres in *kharif* and 1,561 acres in *rabi* in the non-fluctuating area, or a total of 22,579 acres, which were watered but not sown, and on which no water rates were charged. The lands under fluctuating assessment are not subject to water rates, but the canals receive a credit for any fluctuating revenue in excess of the standard figure of Rs. 37,000 per annum. The fluctuating area irrigated, excluding "palever," was 6,662 acres in *kharif* and 7,003 acres in *rabi* and yielded Rs. 16,467 and Rs. 5,721, respectively, or a total of Rs. 22,188, which is Rs. 14,812 less than the above standard figure.

Imperial Minor Works with Revenue Accounts only.

Lower Sutlej Inundation Canals.

257. There was an almost total absence of rainfall, and the Sutlej was low in the sowing season. 18·6 per cent. of the irrigated area failed as against 18 per cent. last year. The canals irrigated 246,872 acres, of which 200,735 acres matured. Over half a lakh was spent on extensions and improvements to channels and outlets and Rs. 1¼ lakh on maintenance and repairs; no capital account is kept. The gross revenue was Rs. 4·70 lakhs against Rs. 5 lakhs in the two preceding years, and the net revenue was Rs. 1,73,499, which is higher than last year, owing to a reduction in the working expenses.

Chenab Inundation Canals.

258. The river Chenab throughout the year was very low, and in February at the Sher Shah gauge it fell below the lowest level recorded: 184,056 acres were watered against 190,300 the average of the preceding triennium.

The percentages of failed crops were 38·57 for *kharif* and 10·22 for *rabi*, against 33·6 and 12·0, respectively, in the previous year.

The total income from all sources was Rs. 3,90,765 and the expenditure Rs. 1,56,047, showing a net revenue of Rs. 2,33,818 against Rs. 2,16,992 in the previous year.

Muzaffargarh Inundation Canals.

259. The matured area measured 356,402 acres and the failed area 28,963 acres. This is a very satisfactory result, the gross irrigation being above that of the averages of the two previous triennia, while the percentage of *kharaba* was less, being 7·5 per cent. only against 14·0 and 10·4 per cent. for the two triennia. A new head regulator was built for the Puran Escape, and improvements effected in channels and outlets; two new rest-houses were built and the usual silt-clearing carried out.

The revenue realized amounted to Rs. 7,11,972 and working expenses to Rs. 3,22,915, resulting in a net revenue of Rs. 3,89,057 against Rs. 2,99,515 of the previous year and an average of Rs. 2,18,176 for the previous triennia.

In the Sanawan Tahsil sub-soil water has risen seriously and remedial measures have been adopted to stop this evil by reducing the excessive supply of water and by excavating drains.

Provincial Canals.

Shahpur and Ravi Provincial Canals.

260. The supply in the Shahpur Provincial Canals was sufficient and the season favourable, the assessed area reaching 29,569 acres against the preceding triennial average of 21,048 acres. A net revenue of Rs. 29,409 was realised, the working expenses showing a paper decrease owing to the sum of Rs. 13,092 charged to this head during the last two years for surveys having been written back to the proper fund head 43—Minor Works and Irrigation.

The Ravi Inundation Canals irrigated 30,729 acres against 21,319 and 17,492, the two previous triennial averages. The increase was due to the inclusion of the irrigation by escape water from the Deg Nallah on the Upper Chenab Canal, which amounted to 18,260 acres.

The irrigation of the Deg Canal will be taken up by the Upper Chenab Canal, and it was therefore transferred from the Upper Bari Doab Circle to the Upper Chenab Circle during the year. The Lower Bari Doab Canal, on its completion, will take up the irrigation of the other inundation canals which are on the left bank of the river Ravi, and they have, therefore, been transferred to the 2nd Division, Lower Bari Doab Canal.

The gross income amounted to Rs. 7,517 and the working expenses to Rs. 21,625, resulting in a loss of Rs. 14,108 against an average loss of Rs. 1,327 during the previous triennium.

Sutlej Canal Surveys.

261. At the request of the Bahawalpur State Darbar and at their expense an additional area of 3,650 square miles lying on both sides of the railway line from Bahawalpur to Khanpur was accurately surveyed and levelled over with a view to extending irrigation to as much of the land of this State as possible. By the end of financial year all the field work had been completed and the work of plotting maps was put in hand.

Canals in charge of District Officers.

Minor Canals Act.

262. No new canals were notified during the year under the Minor Canals Act.

The area matured by the Gurgaon bunds has largely increased and the income slightly, while the cost of establishment shows a satisfactory decrease. The Delhi bunds and the Surusti Canal in Karnal also worked with satisfactory results. Investigations into the working of the Shah Nahr in Hoshiarpur resulted in a definite scheme for improvement and realignment and for a regulator head and escape. These improvements are now being carried out. The Grey Canals in Ferozepore show a decrease in area watered from 111,737 to 102,781 acres. A full report on this system is still awaited. In Mianwali the Nammal Dam was under construction by the Public Works Department, and completed after the close of the year.

In Montgomery the remodelling of the Gharak and Gharkhana Canals is under consideration. The receipts credited to Government from the Kitchin Canals rose from Rs. 12,998 to Rs. 20,270. In Dipalpur a short lead of half a mile from the Sutlej to a natural depression has resulted in the irrigation of 10,000 acres, and a detailed survey is now being made with a view to further developments.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1912.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1912-13.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1912-13.

Stamps.—Note on the Stamp Statements of the Punjab for the year 1912-13.

Income-Tax.—Report on the Income-Tax Administration of the Punjab during the year 1912-13.

Forests.—Progress Report of Forest Administration in the Punjab for 1912-13.

Provincial Revenues.—Budget for 1913-14 and Financial Statement, published in the *Punjab Gazette.*

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1912-13.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1912-13.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part III—Commercial Services.

Part IV (*b*)—Finance and Revenue.

Part VIII—Local Funds.

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1912-13.

36.—Gross Revenue and Expenditure.

263. The Administration Report of 1911-12, paragraph 495, gives a description of the method of calculating the gross revenue raised in the Province and controlled by the Local Government, and the shares due to Imperial and Provincial Governments, respectively. The following table gives the principal heads of revenue raised in the Punjab, the figures standing for lakhs of rupees :— Gross revenue.

Major heads.	Imperial.	Provincial.	Total.	+ or − on figures for 1911-12.
Land Revenue	72·03	2,21·49	2,93·52	+ 3·86
Opium	5·96	*Nil*	5·96	— ·24
Salt	38·35	*Nil*	38·35	+ ·19
Stamps	27·62	27·62	55·24	+ 2·67
Excise	35·06	35·06	70·12	+ 6·12
Income-Tax	8·45	8·45	16·9	+ ·68
Forest	*Nil*	12·39	12·39	— ·71
Registration	*Nil*	3·51	3·51	+ ·35
Tribute	1·39	*Nil*	1·39	— ·08
Interest	·37	2·46	2·83	— ·1
Law and Justice—Courts	*Nil*	4·89	4·89	+ ·54
Do. —Jails	*Nil*	3·27	3·27	— ·14
Police	*Nil*	1·98	1·98	+ ·19
Education	*Nil*	4·33	4·33	+ ·41
Miscellaneous	·43	10·03	10·46	— 3·69
Irrigation—Major Works	1,63·73	1,63·72	3,27·45	+ 56·12
Do. —Minor Works	7·98	·69	8·67	+ ·68
Civil Works	·79	5·24	6·03	— ·9
All other heads	2·05	4·59	6·64	+ ·46
Total ...	3,64·21	5,09·72	8,73·93	+ 66·41

Gross Expenditure.

264. The gross Government expenditure, excluding expenditure of the Military, Railways, Post Office and Telegraph Departments and capital expenditure on canals is as follows (in lakhs of rupees) :—

Major heads.	Imperial.	Provincial.	Total.	+ or − on figures for 1911-12.
Land Revenue	...	47·42	47·42	− ·61
Salt	5·22	...	5·22	+ ·4
Stamps	·92	·91	1·83	+ ·06
Excise	·92	·93	1·85	+ ·14
Income-Tax	·06	·05	·11	...
Forests	...	7·99	7·99	+ ·34
Registration	...	1·18	1·18	− ·02
General Administration	4·76	12·46	17·22	− 1·11
Law and Justice—Courts	...	42·22	42·22	+ ·05
Do. —Jails	...	13·15	13·15	+ ·87
Police	...	58·54	58·54	− ·09
Education	...	34·44	34·44	+ 10·89
Medical	...	25·86	25·86	+ 4·59
Scientific	1·12	8·71	9·83	+ ·99
Pensions	·05	19·18	19·23	+ ·45
Stationery	·21	6·71	6·92	− ·40
Irrigation—Major Works	73	73	1,46	+ 9·58
Do. —Minor Works	9·17	1·	10·17	− ·99
Civil Works	4·4	71·86	76·26	+ 6·18
All other items	13·73	9·94	23·67	+ 1·66
Total ...	1,13·56	4,35·55	5,49·11	+ 33

37.—Land Revenue.

Land Revenue.

265. As explained in paragraph 497 of last year's Administration Report, the land revenue as given in the Land Revenue Report concerns the year ending 30th September, six months preceding the end of the financial year. There must always be a difference between the total collections as calculated by the Treasury and by the Financial Commissioner's Office in their yearly returns. This year the amount is Rs. 2 lakhs. The Land Revenue Report for the year ending September 30th, 1912, returns the following figures :—fixed collections Rs. 209·9 lakhs, fluctuating Rs. 88 lakhs, other land revenue Rs. 68·4 lakhs, and collections of previous year's demands Rs. 62,427 : total Rs. 3,67 lakhs, or, deducting Rs. 71½ lakhs due to Irrigation, Rs. 2,95½ lakhs. For the financial year ending March 31st, 1913, the land revenue is given as Rs. 2,93½ lakhs. The difference of Rs. 2 lakhs shows the excess collections in the latter half of the financial year 1912-13 over those of the corresponding period of 1911-12, and is due to sales of proprietary rights and new assessments in the Canal Colonies which out-weighed the suspensions granted for the kharif 1911.

38.—Irrigation.

Irrigation.

266. Under the Provincial Settlement, the Punjab Government is guaranteed a minimum net revenue from Irrigation of Rs. 41 lakhs. In

calculating this sum, only direct revenue is taken into account. The Provincial share of the income from Major Works is one half, and of Provincial Works, the whole ; while the Imperial Government takes the whole income of Imperial Minor Canals. Taking the Accountant-General's figures, the Provincial share of direct income from Major Works for the year is Rs. 123·35 lakhs and from Minor Works Rs. 69,165 : deducting Rs. 74 lakhs expenditure (73 lakhs on Major and one lakh on Minor Works) the balance Rs. 50 lakhs is well above the guaranteed minimum. This is the first year in which no contribution on this account from Imperial to Provincial has been necessary. The circumstances of the various canals have been described in section 35 above.

39.—Excise and Opium.

General.

General progress.

267. The year has been one of steady development on lines approved by the Imperial Government. The new Excise Bill received the administrative approval of that Government, and after being introduced into the Provincial Legislative Council was circulated for opinion. It was made law after the close of the year under report. Special measures were taken during the year to combat smuggling of all kinds, rules were framed for the control of cocaine, and similar rules regarding morphia are now before the Government of India. The abolition of wastage allowances has removed anomalies in the working of the liquor supply. Duty on opium has been raised to a uniform rate of Rs. 20 per seer throughout the Province with effect from April 1st 1913, and the duty on *charas* to Rs. 12 per seer from the same date. There still seems to be no sufficient case made out for differentiating special or spiced spirit from plain country spirit in the still-head duty scale. Licenses for sale of liquor at fairs and along pilgrimage routes have been abolished in Kángra District, in the interests of temperance, and similar action has been taken in Siálkot, Ráwalpindi and Attock and will be further extended. At the same time it is realised that the closing down of liquor shops has probably now reached a point beyond which it would be unsafe to proceed without extreme caution : the general average for each retail country spirit shop is 125 square miles of country and 25,000 persons. With the exception of Nábha, the Native States are co-operating heartily with Government in giving effect to a uniform excise policy, and it is hoped that the courts will follow the lead of the legislature in taking a more serious view of smuggling offences. If the present attitude of the judiciary and the public represents Indian opinion, the evidence of a genuine sentiment against drink, and the illicit practices that lead to drink, is conspicuous by its absence. It is satisfactory to note however that temperance societies are already making their influence felt to some extent.

Gross Revenue.

268. The returns are complicated by the fact that the Delhi revenue was transferred from the Province from October 1st, 1912, and by the new system of accounts whereby earnest money for vend fees paid in February and March is at once credited instead of being kept in deposit till after the beginning of the new financial year in April. If these two disturbing factors are eliminated from the account of this and the previous year, comparison shows that excise revenue has risen by Rs. 2,64,603, though the actual receipts totalled Rs. 70 lakhs against Rs. 64 lakhs last year. Expenditure, which does not include charges in the Financial Commissioner's Office, amounted to some two lakhs only. Rupees 1,84,926 is still owing in still-head duty from the Amritsar distillery whose affairs are being managed by the Administrator-General of India. Other arrears are being realised.

Liquor.

Production.

269. The outturn of plain spirit has decreased by 53,000 gallons, while that of other kinds has increased by 19,000 gallons, leaving a net decrease of 34,000 gallons, chiefly due to the fact that the Patiála State has now its

own distillery. Issues were however stimulated by anxiety to take full advantage of the wastage allowance before its abolition. The duty realised was Rs. 25·2 lakhs in spite of the diminished outturn. The Ráwalpindi and Sujánpur distilleries increased their output, while that of Solon and imports from Rosa decreased. Breweries also produced less than last year by 50,500 gallons, but more than in 1910-11: draft rules are under consideration for levying duty on beer manufactured instead of on the quantity issued for sale.

Foreign liquor.

270. Income from licenses for sale of foreign liquor amounted to Rs. 2 lakhs, an increase of Rs. 9,000 on last year's figures. Rum, whisky and brandy of Indian manufacture are ousting imported spirits.

Beer.

271. It is hoped that beer may displace spirit to a larger extent in the towns and in course of time among the rural population as well, and signs are not wanting that the taste for beer is growing among Indians, but as yet sales are insignificant under auctioned bazar licenses.

Country spirit.

272. The total income from country spirit was Rs. 41·6 lakhs, including Delhi receipts for 6 months, against Rs. 40·69 last year: license fees brought in nearly one lakh more than in 1911-12. There was at the same time a decrease in consumption of 5 per cent. on last year's figures, Delhi being excluded in each case; the diminution being greatest in Ferozepore, Lahore and Lyallpur. The decrease is put down to the closure of a number of shops in Ferozepore, the experiment of licenses for "off" consumption only, the success of temperance organizations, and in Lahore to the fact that too high a price was charged for special bottled spirit. In Lyallpur the zamindars wanted their money for purchasing proprietary rights in land and to insure against a poor harvest which was expected. Vend fees have risen to Rs. 3-14-6 per gallon which is 44 per cent. of the price: duty however which forms the other 56 per cent. cannot be raised until the administration has a firmer hold on illicit distillation. The number of wholesale licenses remained practically the same.

Opium.

Revenue, taxation.

273. The main head of income, the duty on excise opium, shows a considerable increase—Rs. 5,58,547 against Rs. 5,13,438 in 1911-12. As the duty continued unchanged throughout the year, the enhanced revenue is due entirely to increased sales, which amounted to over 9 per cent. on last year. There seems to be no reason for supposing that the taste for the drug is spreading and there are indications that a large quantity of excise opium is disposed of illicitly every year for consumption outside the Province. A gradual enhancement of the price seems desirable, and may help to reduce the attractions of smuggling to Burma: definite proposals for increasing the price are now under the consideration of Government. The imports of Hill States opium which appear to have been affected last year by the enhancement of duty in 1910 showed a marked increase, and the duty realized amounted to Rs. 54,789 as against Rs. 22,934 in 1911-12. Receipts from acreage duty (poppy-heads only) in Jullundur and Hoshiárpur declined from Rs. 2,483 to Rs. 1,205. The similar duty on poppy cultivation in Kulu (Rs. 9 per acre) produced Rs. 20,678, a slight increase on last year's figures. The area under cultivation has increased, but has not yet returned to the average before the enhancement of duty in 1910. Poppy cultivation in Simla is subject to an acreage duty of Rs. 2 and the opium to a further transport duty of Rs. 2 per seer levied at the Kot Khai warehouse. Proposals for the abolition of this warehouse, and the equalization of the duties on Native States opium and on British grown opium in the hills are now before the Government of India. The acreage duty realizations amounted to Rs. 871 as compared with Rs. 940 in 1911-12, but, on the other hand, the receipts from the transport duty amounted to Rs. 4,677 as against only Rs. 3,992 in the previous year.

274. License fees for vend of opium increased from Rs. 5,39,447 to Rs. 5,82,784 and the total realizations from opium from 11 lakhs to nearly 12¼ lakhs. The duty and vend fees now bear exactly equal proportions to the total opium revenue, but the increase of duty will improve the percentage under that head. Retail prices show excise opium as considerably cheaper than any other variety. Afghan opium is declining. Hill opium was cheaper wholesale than last year. Large purchases in British districts by inhabitants of Native States raised suspicions of extensive smuggling; but this evil can be checked if, as is hoped, the Darbars will unite with Government in prohibiting the boiling of opium before sale, a measure already in force in the Pátiala State. Vend.

Hemp Drugs and Cocaine.

275. The effect of the Rs. 10 duty began to be felt during the year under report. Duty realised rose from Rs. 4·15 to Rs. 4·51 lakhs. Consumption decreased from 27,619 seers last year to 25,484 seers. The warehouses at Ambála, Lahore, Simla and Delhi have been closed, and only those at Amritsar, Hoshiárpur, Sultánpur and Ráwalpindi are now retained. Charas.

276. The duty on bhang shows a decrease of Rs. 2,700, exports from Gurdáspur and Hoshiárpur having declined. Consumption, especially in the west of the Province, increased largely last year, and in the year under report there was still an increase, in spite of a large diminution in Dera Gházi Khan. Bhang.

277. The number of licenses for sale of cocaine was, excluding Delhi, the same as last year, while sales slightly increased. The new rules framed during the year for the import, possession and sale of cocaine and its allied drugs came into force from 1st April 1913. With the removal of Delhi from the Province the Punjab Administration is no longer directly responsible for the control of the chief centre for cocaine smuggling to the Punjab. It is too much to hope that the insidious cocaine habit will not eventually spread to Province. But at present outside Ambála there seem to be few signs of any organized smuggling. Cocaine.

Excise Offences and Preventive Measures.

278. The number of persons arrested for excise offences was 775, of whom 570 were convicted. The corresponding figures for last year were 788 and 572. But Delhi City was responsible last year for 63 arrests and 41 convictions for offences connected with cocaine alone, so that the actual number of excise cases brought to light shows no decline. On the other hand, the percentage of convictions to arrests (73) shows an improvement on the percentages for 1911-12 and 1910-11 which were 72 and 70, respectively. It is satisfactory to note a considerable increase in the number of arrests and convictions for illicit distillation, especially in Ferozepore, Siálkot, Montgomery and Lyallpur. Detection is being organised and a special agency was established to watch smuggling in the south-east of the Province: considerable assistance was received from the police. At the same time an Excise Intelligence Bureau has been created, and the issues of opium carefully restricted to the ascertained needs of each shop and it is hoped that a better control will soon be obtained of the gangs of expert smugglers of opium into Burma, which are operating from the Peshawar and Attock Districts.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

279. The working of these mines during the last 19 years has resulted in a net loss to Government of Rs. 4·24 lakhs: however, the raising of the price of salt by 1 anna 2 pies per maund on January 1st, 1912, has had the satisfactory result of enabling the year to close with a net profit of Rs. 2,937 as General.

compared with a loss of Rs. 6,148 in 1911-12. The distribution of salt from this division was to the Punjab and Feudatory States 69 per cent., North-West Frontier Province 1 per cent., Jammu and Kashmír 2 per cent., the United Provinces 19 per cent., Behar 4·9 per cent., and Sind 1·4 per cent. In all, 34·73 lakhs of maunds were issued, which is 0·31 per cent. less than in 1911-12.

The low level tunnel in the Mayo mine was continued for a distance of 690·3 feet at a cost of Rs. 17,452, and an exploration tunnel at the Warcha mine was driven for 429 feet at a cost of Rs. 1,242: Rs. 2,476 were spent at Mari Hill in working drifts.

Sales.

280. 34·92 lakhs of maunds were sold, or 923 maunds more than last year. There was an increase at all the depôts, except Kálabágh, where 77,045 maunds less were sold. The total price realised at these mines was Rs. 2·53 lakhs, compared with Rs. 2·29 lakhs last year.

Through traffic: salt.

281. The through traffic sales, 30·45 lakhs of maunds, of Khewra salt increased by 2·58 per cent. and formed 94·83 per cent. of the rail-borne traffic of the division, as compared with 93·44 in 1911-12. The number of direct dealers with Khewra and of the marts increased. With half a lakh expenditure against Rs. 47,586 receipts, this account closed with an adverse balance of Rs. 2,777, against that of Rs. 331 of last year.

Mandi Mines.

282. The sales fell short of those of last year by 15·48 per cent., only reaching 93,037 maunds. This was due to the failure in the working of a contractor at Guma. The Drang mine turned out an increased amount of salt, but not enough to fully balance the deficiency at Guma. British districts took 43,600 maunds and Hill States 49,437 maunds. The price was 10½ annas per maund throughout the year.

Sultanpur Salt Works.

283. The sales at these works decreased by 3,090 maunds, or 9·7 per cent., to 28,770 maunds. The industry continues to decline, along with the price of the products. Salt ranged from 3 to 5·5 annas per maund, with an average of 3·83 annas against 4·56 annas, which was last year's average. Working factories decreased by 2 to 15. The Hakimi cess realised Rs. 449 against Rs. 498 last year.

Internal Branch.

284. Fees from licenses realised Rs. 3,782 this year, which is less than the sum paid for licenses last year. Twenty-five saltpetre refineries worked 2·64 lakhs of maunds of saltpetre and produced 94,147 maunds, of refined saltpetre and 91,581 maunds of impure salt; 7,359 maunds of this salt was excised.

General.

Financial results.

285. Exclusive of the operations of the Internal Branch, complete Provincial figures for which are not published, the accounts for the Punjab are as follows:—

Source.	*Receipts.*	*Charges.*	*Nett.*
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Cis-Indus	37·94	4·24	33·69
Mandi	·11	·04	·05
Sultánpur	·29	·12	·16
Paid to Baháwalpur	...	·8	—·8
Total ...	38·35	5·22	33·13

286. The average supply of salt per head of the population in the Punjab is worked out on the average of the last three years at 9·11 lbs., and the average price noted at nine centres was Re. 1-9-8 or one pie per maund less than last year and equal to the price in 1910-11. Supply and price.

41.—Stamp Revenue.

287. The figures given in this section differ in some respects from those tabulated by the Accountant-General in section 36. They are taken from the Stamp Report which adopts a different method of classification. Some Rs. 5,000 due to recoveries from pauper suits are included in income in the Stamp Report, but not under stamps in section 36: similarly the Stamp Report includes refunds in stamp expenditure, which are omitted therefrom in section 36, and does not include charges for plain paper which come into the total expenditure on stamps as given in that section. There was no slackening in 1912-13 of the steady increase in receipts under the Court-Fees and Stamp Acts, which has been noticed for several years. The total income was Rs. 55·28 lakhs, an advance of Rs. 2·66 lakhs on the figures of last year. The total expenditure reached Rs. 2·14, an increase of ¼ lakh, principally due to refunds on unused stamped forms belonging to Marriage and Relief Funds and Insurance Companies which ceased to exist during the year, owing to the new legislation for their control. The net receipts are Rs. 2·4 more than in 1911-12, although the figures for the old Delhi District for the first six months of the year only are included. General.

288. The income from court-fee stamps reached Rs. 36·24 lakhs, an excess of Rs. 2·26 on last year. Increases are shown in 24 districts and are generally attributed to more and more valuable civil suits, and the raising of the court-fees on land suits. Settlement operations account for a rise in civil litigation. Court-fee stamps.

289. The income from non-judicial stamps was Rs. 19·03 lakhs, more by Rs. 34,751 than last year. The large decrease of nearly ½ lakh shown against Delhi was more than counter-balanced by the increase of Rs. 89,000 in the sale of non-judicial impressed stamps on sheets. This is spread over 23 districts, and exceeds Rs. 10,000 in Ferozepore, Lahore and Lyallpur, and is said to be due, respectively, to the substitution of deeds for account books in mortgages and sales, to the sale of stamps of high values to residents of districts other than Lahore, and to sales and mortgages by colonists on acquiring proprietary rights. Non-judicial stamps.

290. The total number of unstamped or insufficiently stamped documents dealt with during the year was 2,611, on which duty and penalty realised came to Rs. 26,113, or about Rs. 4,000 more than in 1911-12. Penalties.

42.—Assessed Taxes.

291. The total collections for the year amounted to Rs. 16·9 lakhs which includes one lakh levied in the Delhi area up to the end of the calendar year 1912, the sum due for the last quarter of which is in process of adjustment. The collections from salaries and pensions paid by Government amounted to Rs. 2·84 lakhs and those from interest on securities to Rs. 16,000. As regards the remaining heads, the final demand for the year 1912-13 was Rs. 12·88 lakhs, a decrease of Rs. 13,000 as compared with last year's figure, which included Rs. 1·58 lakh due from Delhi. Thus if Delhi be excluded from the figures of both years, there is a satisfactory increase of Rs. 1·45 lakh. This growth occurs mainly in taxation or general sources of income, but there is also an increase of Rs. 16,000 under "Profits of companies," mainly owing to the raising of the assessment of the Southern Punjab Railway. General.

Incomes between Rs. 5,000 and Rs. 10,000 show a marked decline in numbers, resulting in a decrease of tax from Rs. 2,35,000 to Rs. 2,02,000. The most remarkable decrease is in the XIIth class (Rs. 50,000—Rs. 1,00,000), whose income tax has dropped from Rs. 28,000 to Rs. 9,000. This drop is more than made up by the XIIIth class (Rs. 1,00,000 and more), where the proceeds of the tax this year are Rs. 89,000 as against Rs. 60,000 in 1911-12.

Notable increases in district totals are found in Ferozepore (Rs. 27,000), Lahore (Rs. 28,000), Multán (Rs. 16,000), Amritsar (Rs. 6,000) and Shahpur (Rs. 8,000). In Ferozepore the increase comes entirely from the Southern Punjab Railway, while in Lahore and Multán the results are due to the deputation of special officers for income-tax investigation and revision work. Outstandings are high in Jhelum, Gujrát and Lyallpur and proportionately high in Simla.

Objections continue to show a high percentage, but little can be deduced from the mere accumulation of petitions. In Kángra, Lahore, Multán and Muzaffargarh, however, the percentages range from 40 to 66. In Siálkot the figure is only 2·8, and is attributed to the group system of assessment introduced by Colonel Popham Young, the Deputy Commissioner: the experiment will be watched for another year. The total demand for the Province as finally fixed was less by 8 per cent. only than the initial demand.

Special enquiries.

292. The system which was inaugurated last year of deputing special officers to revise the income-tax assessments in important towns has been extended. Operations which began with Lahore, Lyallpur and Multán have now been extended to Ambála, Amritsar, Gujránwála, Ráwalpindi, and several smaller places. The experiment has certainly justified itself, though the results are not uniform. In Lahore the amount remitted on appeal was one-third of the original enhancement.

43.—Forest Revenue.

Gross.

293. The total revenue of the forest year ending June 30th, 1913, was Rs. 12·58 lakhs, and the total expenditure was Rs. 8·09 lakhs, yielding a cash surplus of Rs. 4·49 lakhs. The following table gives details:—

Revenue.	Rs. (lakhs).	Expenditure.	Rs. (lakhs).
I—Produce removed by Government agency ...	2·77	A—Conservancy and Works	3·35
II—Produce removed by consumers ...	8·39	B—Establishment	4·73
III—Drift, etc.	·46	Cash balance	4·49
IV—Forests not managed by Government ...	·02		
V—Miscellaneous ...	·93		
Total ...	12·58	Total ...	12·58

Income rose by Rs. 2 lakhs, expenditure by Rs. ·3 lakh and the cash surplus by Rs. 1·71 lakh, for reasons which have been given above in section 30.

Briefly, the excess in revenue is due to better working of resin, to improved fellings in Kulu, special sales of deodar in Kángra, better rains which improved the grass, and to a change of policy, whereby trees are sold standing instead of being worked out departmentally. The cost of establishment has risen.

294. The net results of the year's working is— Nett.

	Rs. (lakhs).
Cash surplus	4·49
Increase in value of live and dead stock	·15
Increase in outstandings of revenue	·90
Increase in outstandings against contractors, etc.	·08
Total ...	5·64
Deduct—	
Decrease in value of stock	·84
Net result in favour of the year ...	4·79

44.—Provincial Revenues.

295. The income and expenditure under the Provincial section of the accounts in the last two years are as follows :— General.

	1911-12. Rs. (lakhs).	1912-13, Rs. (lakhs).
Opening balance	69·75	1,03·73
Income	3,99·74	4,35·00
Assignments from Imperial	37·78	74·73
Total ...	5,07·27	6,13·46
Expenditure	4,03·54	4,35·56
Closing balance ...	1,03·73	1,77·90

296. There is an increase of Rs. 37 lakhs in assignments from Imperial revenues. Of this sum, Rs. 6·77 lakhs represent the final adjusting entry under the Provincial settlement, and Rs. 1·40 lakh the annual credit given to Provincial revenues under the Famine Insurance Scheme : Rs. 5·22 lakhs are to cover the loss of municipal contributions and also some additional expenditure involved by the relief of Municipalities from Police charges. These subsidies do not ordinarily vary from year to year. Almost the whole Assignments.

of the balance was given for specific expenditure. The improvement of sanitation and education absorb Rs. 14½ lakhs and Rs. 32 lakhs respectively and the Punjab University received a grant of Rs. 2·35 lakhs. Finally Rs. 12 lakhs were assigned in aid of general Provincial resources.

Income.

297. The principal increases in major heads of income have been discussed in the various sections of this report relating to the subjects concerned, and paragraph 36 shows the plus and minus results as compared with last year's figures. The most striking increases are connected with Irrigation 56 lakhs, Excise 6 lakhs, Land Revenue 3·86 lakhs, and Stamps 2·66 lakhs.

Expenditure.

298. The expenditure exceeded the revenue raised in the Province by half-a-lakh only this year against Rs. 3·8 lakhs last year. The chief increases are Rs. 10·89 for Education, Rs. 9·58 for Major Canal Works, Rs. 6·18 for civil works, Rs. 4½ lakhs under Medical, Rs. 2·1 lakhs under Miscellaneons: while a decrease of over a lakh was effected under General Administration.

45.—Local Funds.

General.

299. The creation of Imperial Delhi has involved the loss of one tahsil and one thana only of the area under the control of district boards, whose total revenues have not been seriously diminished thereby: the returns for this year may therefore be usefully compared with those of last. The gross income has risen from Rs. 53·7 lakhs to Rs. 64·4 of which Government contributed Rs. 7·08 lakhs under Education, Rs. 45,000 under Medical, Rs. 1·05 lakh under Scientific Departments, and Rs. 11·2 lakhs for Public Works: Rs. 19·78 lakhs in all. The incidence of taxation remained unchanged at 2 annas 5 pies per head. The total expenditure was Rs. 62·62 as against Rs. 54·44 in 1911-12.

Local Rate.

300. From the local rate the amount obtained was Rs. 29½ lakhs, which is Rs. 1·94 lakhs in advance of the recoveries of the previous year. The local rate has been enhanced in Ferozepore, Siálkot, Lahore, Amritsar and (since the close of the year) Jullundur.

Education.

301. The increase in receipts under Education was no less than Rs. 3·47 lakhs, of which Rs. 38,000 was due to fees and the remainder to Government grants. Expenditure, however, rose by Rs. 1·92 lakhs only. This is largely due to the fact that boards were not prepared to spend so much; teachers take time to train, and without them it is useless to open schools. The figures for expenditure given in last year's Administration Report related to maintenance and management only, which this year have cost Rs. 12·45 lakhs. There are besides scholarships, grants-in-aid and contributions, including which items the disbursements rose from Rs. 13·15 lakhs to Rs. 15·07 lakhs.

Medical.

302. Receipts under the head "Medical" decreased from Rs. 1,25,199 to Rs. 1,05,571. The falling-off is mainly in "Endowments" Rs. 12,774 and in "Contributions from Government" Rs. 4,089. The expenditure, however, increased from Rs. 5,86,000 to Rs. 6,16,000. The largest increases were in contributions to Government and to lunatic asylums and other contributions. The vaccination expenses increased but not so much as to balance the decrease in plague charges.

Veterinary.

303. Receipts from Veterinary Hospitals rose slightly to Rs. 7,961 and expenditure from Rs. 56,825 to Rs. 61,690, the charges for stallions and bulls amounting by Rs. 10,000 to Rs. 1,13,896.

304. Income under Civil Works was Rs. 18·01 lakhs against Rs. 12¾ lakhs last year, while expenditure rose from 22·4 lakhs to 27·06 lakhs. Taking receipts, an increase of Rs. 8,500 was obtained from ferries and of Rs. 20,500 from rent of buildings and lands (other than *nazul*), sale of buildings and other property (not escheated) brought in an extra Rs. 82,600, sarai fees Rs. 2,600, sale proceeds of trees, grass, etc., Rs. 12,600 and miscellaneous receipts an increase of Rs. 55,400, but the major part of the very large rise is due to more liberal grants from Provincial Revenues, amountiug to Rs. 11·2 lakhs or nearly Rs. 3½ lakhs more than last year. The Government grant was more than spent on roads which took up Rs. 11·29 lakhs, the new construction costing Rs. 2⅔ lakhs and maintenance nearly 9 lakhs. The question of increasing the subsidy for feeder roads is being considered, as boards seem to find that upkeep of roads is beyond their present resources. There is of course a large field for expenditure of money on metalled roads in every district in the Province, and Government is fully alive to the desirability of extending roads where possible, and particularly of not neglecting roads that run parallel to railways. **Civil Works.**

305. Expenditure on arboriculture has risen to Rs. 2,09,541, which is a return to the high figure of two years ago. Not many districts show a profit on the year's working, but Siálkot and Hoshiárpur each had an income of Rs. 30,000 against an expenditure of Rs. 18,000 and Rs. 9,000, respectively. Lyallpur spent no less than Rs. 20,000 on arboriculture during the year. **Arboriculture.**

306. The Gujrát balance was again below minimum. Balances are high in Lahore, Hissar, Rohtak, Gurgaon, Multán and Lyallpur. The Attock District Board, which was for many years in a state of bankruptcy, is now flourishing. In future years Government will forego the contribution of 20 per cent. on the local rate, thereby materially assisting the revenues of district boards. **Balances.**

46.—Municipal Funds.

307. The aggregate income of the municipalities in the province rose from nearly 72 lakhs in 1911-12 to nearly 84½ lakhs, or, excluding the opening balance, 66·02 lakhs. The figures for Delhi have been excluded this year, and the net rise is Rs 8·17 lakhs, chiefly due to larger octroi collections and grants from Government. Octroi furnished Rs. 36·89 lakhs (an increase of Rs. 2·56 lakhs) out of a total income from taxation of Rs. 41·15 lakhs. Municipal property and powers apart from taxation brought in one lakh more than last year: grants and contributions 4·68 lakhs. The incidence of taxation in municipalities has increased from Rs. 2-6-2 per head of population to Rs. 2-8-11 per head: in notified areas it has remained steady at 6 annas-and-a-half. Grants from Government for general purposes amounted to nearly seven lakhs, for Education Rs. 42,000 and for Medical Rs. 27,000. The Sanitary grants have been described in section 51.—Sanitation. **Income.**

308. The expenditure has risen from Rs. 54 lakhs to Rs. 59·78 lakhs. General administration and collection charges rose by ¼ lakh, protection from fire by Rs. 30,000, lighting by Rs. 22,000, capital outlay on water-supply by Rs. 72,000, drainage by nearly 2 lakhs, conservancy by Rs. 46,000, hospitals by Rs. 66,000, arboriculture by Rs. 33,000, Public Works by Rs. 1·56 lakh, Public Instruction by Rs. 94,000. Out of a total rise of Rs. 5·81 lakhs, five lakhs are shown under the head Public Health and Convenience. The main decreases are Rs. 70,000 under Police charges, Rs. 29,000 for water-supply establishment, repairs, etc., Rs. 68,000 for markets and slaughter houses Rs. 9,000 interest, Rs. 45,000 unforeseen charges. The proportion of expenditure devoted to administration and collection was 11 per cent., Public Safety 5·7 per cent., Public Health and Convenience (including Public Works 14 per cent.) 58·4 per **Expenditure.**

cent., Public Instruction 10 per cent., contributions for general purposes 2·6 per cent., Miscellaneous 6 per cent., Extraordinary and Debt 5·5 per cent.

Balances.

309. Closing balances increased from 18 lakhs to 24·71 lakhs. All municipalities and notified areas closed the year with good balances except Núrmahal and Gurdáspur and the notified areas of Nawashahr and Gujar Khan, Sujánpur, Srígovindpur and Chakwál, the three last having had low balances last year also. A large number of municipalities maintain unduly large balances which might be used for purposes of public utility or reduction of taxation.

Loans.

310. There were no loans of any importance during the year. The Hazro Committee received a small loan of Rs. 1,744 from Government.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census.—Report on the Census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishan Kaul, C.I.E.

Births and Deaths.— } Report on the Sanitary Administration of the Punjab and Pro-
Sanitation.— } ceedings of the Sanitary Board for the year 1912.

Emigration.—Census Reports as above.

Medical Relief.— { Notes on the Annual Statements of the Dispensaries and Charitable Institutions of the Punjab for the year 1912.
Report of the Pasteur Institute, Kasauli, for the year 1912.
Report on the working of the Punjab Lunatic Asylum for the year 1912.

Vaccination.—Notes on Vaccination in the Punjab for the year 1912-13.

PUBLICATION OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part V, Area, Population and Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1911-12.]

48.—Births and Deaths.

311. An effort has been made to calculate the present population by setting off births against deaths, and the result shows an increase in every district since 1911, except Simla where the circumstances are special. The differences are slight compared with what they will be a few years hence. The system does not take account of emigration and immigration, and does not admit of comparisons with other provinces. It serves, however, to explain abnormal rates in some cases. **General.**

With the exception of small-pox, which caused a death-rate of 1·57, a rate much higher than that recorded in the three preceding years, the year 1912 like its predecessor was a very healthy one. The total death-rate was only 26·63, the lowest recorded since 1886 when it was 26·61, while the birth-rate was as high as 45·3. The incidence of plague and malaria was comparatively slight; fevers accounted for much less mortality than in recent years, while plague showed a reduction of 7·35 compared with the previous year. The vital statistics of the area now comprising the new province of Delhi have been entirely excluded from this report.

312. Of the 876,125 births registered in 1912, 458,052 were males and 418,073 females. The total birth-rate amounted to 45·3 *per mille* which is 3·8 in excess of the mean for the previous five years and 1·4 in excess of that recorded last year. This excess in the birth-rate is due to the practical absence of malaria in the preceding autumn and to the healthiness of the latter half of the previous year and the year under report. **Births.**

The rise was general all over the province, but the rate varies from 30·6 in Dera Ghazi Khan to 53·1 in Karnál. It may be noted that these two

districts occupied the same places in the death-rate list, with rates of 19·8 and 33·8 respectively. Among the towns the recovery of Amritsar from the effects of the terrible fever epidemic of 1908 is remarkable. The birth-rate there was 9 *per mille* in excess of the mean rate for the five years 1907—1911. There is no European country that can vie with India in respect of the birth-rate. During the five years ending 1905, the rate was highest in Germany, Austria and Spain, but nowhere did it much exceed 35. The Punjab this year ranked third among the Indian Provinces in the matter of birth-rates.

The excess of births over deaths amounted to 18·7 *per mille*, and with the exception of Simla, where the birth and death-rates were the same, in every district the birth-rate was higher than the death-rate. Male births exceeded female by nearly 40,000 or 2·1 per cent. There are now, owing to the loss of Delhi and old Dera Gházi Khan, 38 municipal towns with a population of over 10,000, and in these towns the birth-rate was 45 compared with 42 and 40, the rates for the preceding year and quinquennium. Of the largest towns, Amritsar recorded a rate of 47, Multán 46 and Lahore 39 *per mille*.

Deaths.

313. The total number of deaths was 515,036, the total death-rate being 26·6 *per mille*, the male 25·4 and the female 28·1. The total rate was 34·1 and 42·7 for the previous year and quinquennium. Of the total death-rate 14·2 or rather more than half was due to fevers, and 6·2 or a little less than a quarter to all other causes: the plague rate was only 1·5, being less than that of small-pox. The Punjab rate was seventh on the list of Provincial death-rates, and was lower than the rates in Spain, Hungary and Russia a decade ago. In the towns of Great Britain of over 60,000 inhabitants the rates are 9·1 to 21 deaths *per mille*: in the corresponding three towns of the Punjab the rate was from 26·2 to 38·3, which are the figures for a healthy year.

As mentioned already, the lowest rate was in Dera Gházi Khan 19·8 and the highest in Karnál 33·8. The reduction in plague mortality shows itself especially in the Gurgaon, Amritsar and Rohtak Districts, where the decrease in the death rate varies from 18·5 to 20·3, on the quinquennial average preceding. There was no great variation in the monthly death-rates, the highest being 2·75 in December and the lowest 1·77 in February, which was a dry warm month. Plague occasioned a slight increase in the second quarter, fevers and small-pox in the last quarter. The female infant mortality is again less than that of males, being 201·13 against 210·44. The urban death-rate was 31·94 and the rural rate 26·12.

Cholera.

314. There were 1,833 deaths recorded from cholera in 1912, 573 more than in the previous year. In several cases failure to report outbreaks of the disease accounted for many deaths, and punishment was duly meted out to the village officials responsible.

Small-pox.

315. Small-pox carried off 30,339 people, the largest annual number since 1896: the mortality was greatest among infants under one year of age. The spread of the disease was probably much assisted by inoculation, which was practised in several districts. Ferozepore District was seriously infected. Towns in which the Vaccination Act is not in force show small-pox death-rates varying from 8 to 18 *per mille*, while those where vaccination is compulsory had an average of 2·48 only. An inspection post at Tára Devi effectually protected Simla, which only had 54 cases.

Plague.

316. Plague caused 35,123 deaths as compared with 198,669 last year. The destruction of rats in their holes by smoke seems most efficacious, and the system will be further utilized next year. The attitude of the people towards the plague staff is very much more cordial than in previous years: this is due to further acquaintance, of course, and to the policy of free attendance by the plague staff in general medical and surgical relief.

Fevers.

317. Deaths from fevers decreased to 275,040, with a rate of 14·22 *per mille*, against 15·33 and 21·66 in the previous year and quinquennium. This was due to the favourable character of the seasons.

318. The deaths from dysentery and diarrhœa were 9,785 and 119,926 were due to "all other causes." Other causes.

319. Among Indian Christians the conditions of life come closer to the sanitary standards than among Hindus and Muhammadans, though their material condition is probably much the same. The death-rate among this class was 19·40, while among Muhammadans it was 26·06 and among Hindus 27·46. Mortality by classes.

49.—Emigration and Immigration.

(There is nothing to report under this heading.)

50.—Medical Relief.

Dispensaries.

320. The number of dispensaries increased during the year by 4 to 469, 13 having been opened and 9 closed: the following four paragraphs deal with three classes of dispensaries only, namely, one State public, 271 Local Fund (5 of which are new), and 35 private aided dispensaries. The remainder are classed as special State, private non-aided and railway—police 31, canal 77, others 3, railway 44, and private aided 7. Number of institutions.

321. An increase of 411,000 in the total number of patients treated is reported, but the figures seem doubtful in some cases, and though the popularity of hospitals is growing there seems some reason for attributing the increase partly to faulty returns. Eighty-nine of the dispensaries have no accommodation for in-door patients, and the average number of beds in the remainder is 20, the total number having increased by 143. 84,967 is the return for in-patients treated, an increase of 10,083 on last year. There is undoubtedly over-crowding in some dispensaries, especially in the spring and autumn, when patients flock in for treatment. But attention has also been drawn to the fact that the accommodation at some hospitals is not fully utilised. Separate arrangements are generally made for females, and *dais* and female compounders are being increasingly employed. At 7 district hospitals there are fully qualified lady doctors, and female Sub-Assistant Surgeons at 6. The out-patients are returned as having increased by nearly 400,000 to 4,424,584. Patients.

322. A quarter of a million operations were performed, an increase of nearly 20,000 on last year and of 56 per cent. on the average of three years preceding 1901: of these, selected operations numbered 33,430, an increase of 29 per cent. The death-rate was ·22 per cent. The selected operations include 14,874 for the extraction of the lens, an increase of 28 per cent., the percentage of good vision gained also rising from 92·47 to 94·2. 230 more operations for stone were carried out than last year, the subsequent deaths only increasing by 7: for hernia the operations increased by 114 to 376, and ovariotomies by 14 to 64, with no increase in deaths: abdominal sections rose by 59 to 126, and the subsequent deaths by 13 to 24. The largest number of operations for cataract were performed at Moga Hospital, 2,900, and for stone at Multán: in the matter of operations Colonel Smith at Amritsar and Sub-Assistant Surgeon Mathra Das at Moga again head the list. Surgery.

323. The year opened with a cash balance of Rs. 1,36,113. The total income during the year from all sources was Rs. 13,80,088. Of this Government contributed Rs. 1,45,622 against Rs. 1,31,309 in the preceding year, or 10·55 per cent. of the total; Local Funds Rs. 4,51,014 against Rs. 4,05,719, or 32·68 per cent.; Municipal Funds Rs. 4,88,774 against Rs. 4,28,593, or 35·41 per cent.; interest on investments amounted to Rs. 9,885 against Rs. 11,886, or ·71 per cent.; subscriptions received amounted to Rs. 1,25,574 against Rs. 1,35,963, or 9·09 per cent. (Europeans Rs. 88,758 or 6·43 per cent., Indians Rs. 36,816 or 2·66 per cent.); sale of securities brought in Rs. 1,59,219 against Rs. 94,939, or 11·53 per cent. There has been some increase in the Indian subscriptions, Finance.

but the amount is still very low, having regard to the circumstances of the people and the great popularity of the dispensaries. Local subscriptions for the improvement of public hospitals and dispensaries only came to just over Rs. 29,000, and the special benefactions mentioned by the Sanitary Commissioner are confined almost exclusively to the south-eastern districts of the province, where the traditions of public spirit in regard at least to medical relief appear to be much stronger than in the more prosperous and enterprising districts of the Punjab proper. Districts where less than Rs. 200 was subscribed during the year included Amritsar and Siálkot. The expenditure amounted to Rs. 13·42 lakhs against Rs. 11·79 lakhs, last year. The increase was mostly for buildings (one lakh).

Mayo Hospital.

324. The Mayo Hospital extensions which are being carried out will be completed next year and the Province will then be provided with a hospital worthy of it. The site for the new College building is being cleared. Other alterations and additions in connection with the King Edward Memorial Scheme will be taken in hand on the Veterinary College site becoming available and when completed the College will be much improved in all departments.

Special dispensaries.

325. Of the total number of patients treated in the State Special and Railway dispensaries, Police hospitals contributed 47,395 as against 44,594 in the preceding year, Canal dispensaries 203,044 against 200,497 in 1911, other State special hospitals 9,535 against 9,468, and Railway dispensaries 212,568 against 177,267 in the preceding year.

There were 10 Canal dispensaries open to the public at the beginning of the year, but 6 of these were closed—5 in the Lyallpur District and 1 in the Karnál District, the former on account of the District Board ceasing to contribute its share from 1st April 1912.

Unaided dispensaries.

326. At 7 of the 12 private non-aided dispensaries, which have submitted their returns, 57,090 persons were treated and 3,403 operations were performed against 66,604 and 2,681, respectively, in the preceding year. These 7 dispensaries provided 18 beds for males and 54 for females and treated 280 men and 3,882 women as in-patients and 27,658 men and 25,270 women as out-patients.

The field for work.

327. The returns show that only 1,284 cases of small-pox were treated at dispensaries. The total number of deaths in the province exceeded 30,000. Taking the case-mortality as about 15 per cent., there must have been about 200,000 cases, so that not much more than 1 in 150 received treatment at dispensaries. This is exclusive of the cases treated by the travelling dispensaries, but the figures show what a great field is open for a system under which treatment of sick people in their villages is possible.

Pasteur Institute.

328. During the year 3,550 patients underwent anti-rabic treatment at the Pasteur Institute at Kasauli, as against 2,268 in the year preceding. Of this number 400 were Europeans and 3,150 Indians. There were 16 failures, all amongst Indians. In addition to the number treated 360 were advised that treatment was not necessary. In its capacity of Provincial Laboratory, the Institute reported on 1,104 specimens as against 669 last year: the majority were as in 1911 connected with serum diagnosis for typhoid, Malta fever and paratyphoid, examination of blood for malaria and tumours and of brains for Negri bodies.

Lunatic Asylum.

General conditions.

329. The daily average of inmates rose by 15 to 683, the proportion of males to females being less than four to one, against the five to one proportion noticed in last year's report. There were, however, 11 criminal male

lunatics to 1 female. The death-rate was low, at 10·4 and would have been lower but for two unfortunate murders, and an outbreak of cholera. The most striking result of the year is the number of cures, 155, which is higher by 68 than the preceding quinquennial average. At the same time there were 22 re-admissions. As regards age, 171 of 248 admissions were between 20 and 40, and 49 between 40 and 60, leaving only 21 below 20 years and 7 above 60. Forty-nine new cases were due to spirit and intoxicating drugs, out of 134 assignable to particular causes.

330. Masonry flooring and dadoes have been provided to all the interior, and for the verandahs of the barracks and sleeping rooms. One European and two additional attendants have been sanctioned, in order to improve the staff and ensure control, particularly of the European inmates. A net sum of Rs. 8,937 was realised by manufactures carried on in the asylum, and the total expenditure rose by Rs. 8,400 to Rs. 1·35 lakhs. The Franciscan Sisters continued to work in the Female Asylum with their usual devotion. Improvements.

51.—Sanitation.

331. The income derived from sale of street sweepings in 1912 amounted to Rs. 1,52,636, which is Rs. 7,376 more than the figure of 1912 and less than that of 1910 by nearly Rs. 14,000. Comparing the figures for conservancy receipts other than taxes and rates for 1912-13 with those of 1911-12 and excluding Delhi, there is an increase of Rs. 5,052 only. At the same time the statistics of sewage irrigation show a distinct advance, 196 acres being added to the area under sewage irrigation and Rs. 9,600 to the income therefrom. The major part of this increment is provided by Ambála which added 96 acres to area and Rs. 7,232 to income : the area in Ambála is 53 acres short of that in Lahore (580 acres), but the income (Rs. 14,094) is more than double the Lahore income (Rs. 5,463) from this source. Lyallpur is making good progress, having increased its acreage from 31 to 81 and its income from Rs. 2,465 to Rs. 2,950, which amounts to Rs. 36 per acre, against Rs. 26 obtained by Ambála and Rs. 9-4-0 by Lahore. The possibilities of this source of income have evidently not yet been exhausted. Municipalities.

Out of an aggregate income of Rs. 84·5 lakhs the Municipalities spent some Rs. 73 lakhs on objects included in the term sanitation (against 19 lakhs last year, excluding Delhi), *viz.*, on conservancy Rs. 7·8 lakhs, water-supply Rs. 4·48 lakhs (including Rs. 2 lakhs capital expenditure), on drainage Rs. 5 lakhs (including 3·77 lakhs capital) and 5¾ lakhs on roads.

332. District Boards expended Rs. 12,485 on sanitation, Rs. 9,814 on water-supply, and Rs. 12,739 on drainage works, compared with Rs. 8,800, Rs. 13,323 and Rs. 4,546 last year. District Boards.

333. During 1912 the wells cleaned numbered 7,394 against 4,811 last year, while parapets were constructed for 1,287 wells against 662 : the cost of these comparatively large operations was, however, only Rs. 30,080, compared with Rs. 38,302 spent last year under these heads. Rewards for village sanitation were not granted. Rural sanitation.

334. The Thánesar Sun Eclipse Fair was sparsely attended and no infectious disease was detected. Very complete sanitary arrangements were made. Rai Bahadur Thakur Das, retired Civil Surgeon, again superintended the medical and sanitary arrangements at the Choa Saidan Shah and Katas Fairs in Jhelum. The Gulu Shah Cattle Fair in Siálkot was stopped owing to cholera in Siálkot and the neighbouring districts. Fairs.

335. The Sanitary Board met twice in Lahore and twice in Simla, and allotted in the first three months of 1912 the remainder of the grant for 1911-12 : but only Rs. 66,000, were allotted of the fresh grant of a lakh-and-a-half for 1912-13. This sum included Rs. 6,254 more for Siálkot drainage, Rs. 12,040 for Amritsar water-works, Rs. 39,000 for Chiniot drainage scheme, and Sanitary Board.

Rs. 4,265 for the water-supply of the last-named town. Schemes which have received administrative and technical sanction are estimated to cost 13 lakhs and 3·7 lakhs, respectively, while in addition the Amritsar sewerage scheme (to cost Rs. 2·2 lakhs) has been referred to the Chief Malaria Medical Officer for opinion.

Tube wells.

336. A grant-in-aid of Rs. 7,000 was sanctioned by the Sanitary Board and approved by Government in June 1912, to acquire land and sink wells for the Gulu Shah Fair in the Siálkot District, but was not allotted pending the decision of Government as to whether the wells should be of the ordinary type or tube wells.

52.—Vaccination.

Work of the staff.

337. There were over 30,000 deaths from small-pox during the year the highest number recorded since 1896. The number of vaccinations performed was in consequence unusually high, being 39 per cent. in excess of the average for the preceding quinquennium. The increase—69 per cent. in re-vaccinations—is a striking feature of the year's working. The total number of operations performed by all establishments amounted to 1,032,847, of which 710,994 were primary and 321,853 re-vaccinations. The percentage of success was 97·99 in the case of primary and 73·50 in re-vaccination as against 95·03 and 71·85 in 1911-12, showing a satisfactory improvement. House to house vaccination was carried out only in selected districts. The popularity of the Gurdáspur staff seems to account for the large number of operations (23,428) performed by this method in that district.

Cost of vaccination.

338. The total cost of the department amounted to Rs. 1,25,812 or an increase of Rs. 1,492 as compared with last year. The excess is chiefly under the head of contingencies on account of increased demand for vaccine obtained by local bodies on payment from the Punjab Vaccine Institute.

The average cost of each successful operation performed during the year was 2 annas and 4 pies as compared with 2 annas and 8 pies in the previous year. If the amount of Rs. 18,363 on account of the cost of the vaccine sold, which has been credited to Government, be deducted from the total expenditure, the average cost would amount to 2 annas as against 2 annas and 4 pies in 1911-12. The decrease in the average cost of a successful operation is due to the larger number of operations that have been performed during the year under report.

Vaccination in towns.

339. Eighty-three per cent. of the total number of children under one year of age available for vaccination were successfully operated on in towns where the Act is in force, as compared with 70 per cent. where vaccination is optional.

Vaccine Institute.

340. The principal buildings of the Punjab Vaccine Institute at Lahore were completed during the year 1912 at a cost of Rs. 52,464 and were ready for occupation and work by the 1st October; certain additional improvements are being carried out.

The Institute supplied vaccine lymph to all the civil districts and to 26 Native States in the Punjab, to the North-West Frontier Province, Kashmír and Jammu, Balúchistán, Sind, Kathiáwár, Nepál, Tibet and Afghánistán, to Military Medical Officers in the Punjab and North-West Frontier Province, to private individuals, and to the Bangalore and Belgáum Vaccine Institutes. The percentage of case success has risen considerably, and is due to the better conditions in the new Institute buildings.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this Chapter will be found in the report and statistical tables noted below :—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education in the Punjab for the year 1912-13.

(2) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1913.

(3) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1912-13.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1912-13.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Part III, Educational.

53.—General system of Public Instruction.

[*Vide* pages 173—184 of the Administration Report for 1911-12.]

54.—Education.

GENERAL SUMMARY.

General conditions.

341. The year has been one of considerable development in many directions. The liberal grants sanctioned by the Government of India for education have rendered it possible to open a large number of new primary schools, to provide grants for aided schools on a larger scale than formerly, and to give effect to building schemes all over the province. Institutions and pupils show a numerical increase which would have been larger if the separation of the new Delhi province had not lowered the statistics; and educational expenditure has risen by 22 per cent.

General statistics.

342. The following table shows the number of schools and colleges in existence during the year :—

	FOR MALES.		FOR FEMALES.	
	No.	*Attendance.*	*No.*	*Attendance.*
Arts Colleges ...	9	2,773	...	...
Professional Colleges ...	6	843	1	32
High Schools ...	102	46,934	15	1,591
Middle Schools ...	215	46,840	41	5,710
Primary Schools ...	3,689	197,663	709	31,685
Schools for special instruction ...	45	3,289	13	492

The total increase of institutions amounts to 352 and of pupils to 21,685: the real increase if the exclusion of Delhi be taken into consideration is much greater; private institutions show an increase of 561 schools or 7,693 pupils. The percentage of children at school on the total number of school-going age has risen in the case of boys from 19·8 to 21·3 and of girls from 4 to 4·3.

Finance.

343. The total expenditure has risen from Rs. 68·6 lakhs to Rs. 84·2 lakhs, of which sum Provincial revenues provided 35·3 per cent., District Funds 19·2, Municipal 4·6, Fees 24·5, private donations 13·9, and Imperial revenues 2·2 per cent. Thus three-quarters of the education of the province is given free of cost to the recipients. The "Provincial revenues" include large grants from the Imperial Government, namely, Rs. 9 lakhs sanctioned in 1911 for buildings: Rs. 60,000 (recurring) for aided Anglo-Vernacular schools, and the recurring "Durbar" grant of Rs. 3·65 lakhs. Of the 9 lakhs grant, over Rs. 7 lakhs were spent during the year, the balance unspent being due to delay in preparation of plans. Rs. 3·81 lakhs were spent on secondary and nearly Rs. 96,000 on primary school buildings, Rs. 76,000 on girls' schools, Rs. 80,000 on European schools. The recurring "Durbar" grant was mostly spent on grants to local bodies for salaries in primary schools and for Vernacular school buildings. Rs. 35,000 were spent on grants for teachers in European schools. The system of basing grants on teachers' salaries was extended to municipalities, who have also been relieved of the liability to pay grants for secondary departments of Anglo-Vernacular schools. From Provincial revenues Rs. 75,000 was spent on building grants to schools, and also for furniture. The new buildings erected during the year included 146 primary schools, 49 Middle schools, 31 High schools, and 43 hostels.

PRIMARY SCHOOLS (INDIAN BOYS).

Numbers.

344. There was an increase of 273 primary schools (excluding European schools) and of 18,060 scholars: in addition 69 schools are now included in the Delhi Province. The increase is the first-fruits of the Durbar grant, part of which was also spent on buildings and salaries. In one district (Lyallpur) no less than 57 new schools were opened.

Expenditure and results.

345. Expenditure (direct) on tuition in primary schools increased by Rs. 1·29 lakhs, while the fees rose by Rs. 14,722. At the same time there has been a general improvement in the qualifications of teachers, the percentage of certificates being about 60: there is no longer a dearth of recruits, and selection for the training classes is now possible, where compulsion used to be necessary. The curriculum has been simplified. Rs. 2·29 lakhs was given by grants to district boards for buildings of Vernacular schools; the new rates of grants have also stimulated private ventures, but it remains to be seen whether they will survive the increasing popularity of board schools, and the policy of admitting indigenous school teachers to local training classes.

SECONDARY SCHOOLS (INDIAN BOYS).

Statistics.

346. The increase this year is shown as five schools and 542 pupils, but seven schools in Delhi have been excluded. The Khalsa founded three new high schools, the Hindu community two, and district boards two. A number of private secondary schools have also been opened: in Jullundur they increased by 50 per cent. owing to the recent rise in fees. This circumstance has enabled private schools to be independent and therefore more efficient in matters of discipline. Their expenditure rose by Rs. 1½ lakhs, and part of the increase was spent on raising salaries.

Staff.

347. The reorganisation of the Subordinate Educational Service has ensured annual promotion for teachers in Government service, and revised scales of salary have been introduced generally in schools under local bodies. Provident funds, already established by the district boards, have begun to be instituted in aided schools, which find it increasingly difficult to secure good teachers. The percentage of qualified teachers is stated to be over 66 in the Lahore Division, 65 in Ráwalpindi, and over 59 in Ambála. The gradual transfer of city schools to extra-urban sites should make discipline an easier matter than it is at present.

COLLEGIATE EDUCATION.

Statistics. 348. The number of colleges has decreased by two, which are included in the new Delhi Province, and the rise in attendance is for this reason small. The expenditure shows an increase of Rs. 2,745. Fees, however, have gone up by Rs. 26,230. The examination results are better than those of last year, there being no failures, in particular, for the M. Sc.

General. 349. Science teaching and hostels have received most of the money for building this year. Similarly the staff for science teaching has been strengthened in three colleges. Professors of English, Arabic and Botany have been added to the Government College staff, and of Mathematics and Philosophy to the Murray College, Sialkot: St. Stephen's, Delhi, now has a staff of six University men from England.

Punjab University. 350. Affiliation was granted in certain subjects to the Prince of Wales' College, Jammu, the Sri Pratap Singh College, Srinagar, the Kinnaird Girls' High School, Lahore, and to the Government and Forman Christian Colleges, Lahore.

Arrangements have been made, with the aid of the imperial grant, to appoint University Professors of Arabic and Sanskrit.

Funds have been allotted for building an Observatory, and the property of the Convent in Anarkali has been bought for the requirements of the Law and Oriental Colleges. Money has also been allotted for improving the athletic grounds, and removing offices situated in the University premises; and a house has been built for the Assistant Registrar. The extension of the University library buildings will shortly be begun.

TRAINING INSTITUTIONS.

Central Training College. 351. There was keen competition to enter the Central Training College, the roll increased from 229 to 276, and 46 students had to live outside the hostel. The cost to provincial revenues per student fell from Rs. 344 to Rs. 302. Of 234 entered for examination 205, or 88 per cent., passed, while 42 out of 49 students sent up obtained the B. T. degree.

Normal Schools for men. 352. A new Normal School for men was opened at Lyallpur during the year, and schemes for several others are being prepared. Those students who show promise are selected and again weeded out in July. In all 422 remained in training. Of these all but one went up for the Junior Vernacular Examination, 85 per cent., successfully. Most of these students are reported to pass well in "principles and practice of teaching," and in "school management," qualities which are much needed in the schools, where to quote the Principal of the Central Training College, "kindergarten" methods are usually unknown, and "Teachers show or tell pupils what to do; pupils imitate the acts or blindly follow the instructions of their teachers, and even inspectors are liable to estimate the quality of the instruction by the neatness of the specimens submitted to them at the annual examination. Thus the teaching is too often unintelligent, the work of the pupils mechanical, and the estimate of the worth of the exercise based on the wrong data."

Training Classes. 353. Six-month training classes for boys who have passed the Upper Primary Examination were held at 15 centres, 216 out of the 253 students sent up being successful.

Training Institutions for women. 354. In the Lahore Normal School for women the number on the rolls increased to 35: the training has improved considerably in the last three years. The girls who pass out from the Senior Vernacular class are well trained and work well as Head-Mistresses of Middle Schools, while those in the junior class are mostly teachers sent in from district schools, who return to their posts after

training. There are also training classes at Amritsar, Siálkot and Gujránwála, and a new class, for Christians, was started at Clarkabad. Anglo-Vernacular teachers are trained at the Kinnaird High School, Lahore, where six such teachers were trained during the year.

Training institutions for Europeans.

355. The training class at Sanawar numbered 16 students and all the six students who passed out in 1912 obtained employment in the United Provinces. St. Bede's College, Simla, contained 32 students, and at the certificate examination all the candidates presented were successful, 8 out of 12 gaining distinction. Both these institutions are now valuable assets of European education.

Professional and Technical Education.

Professional Institutions.

356. The Law College contained 164 students, which represents a decrease, due to the abolition of the Vernacular section. The college is moving into the new premises purchased by the University. In the Medical College there was a decrease of 15 students, due, it is reported, to the fact that the college has given up teaching the preliminary sciences, which are now taught by the science colleges for the Intermediate Examination, and the standard not being so high as was formerly inculcated by the Medical College, the Medical faculty have taken to rejecting a large number of students who seek to enter the medical classes. The latter too are decreasing owing to the fact that most people in the Punjab are quite content to have the services of Sub-Assistant Surgeons and Compounders, and often prefer Hakims and Vaids.

The North India School of Medicine for Christian Women, Ludhiána, is enlarging its scope with the help of a grant from Government, and will henceforward be known as the Women's Christian Medical College. The Yunani Class in the Islamia College, Lahore, had 60 students, and the Vedic Class in the Dayanand Anglo-Vedic College, 38.

Agricultural College.

357. The Agricultural College had 61 students reading for the diploma, and special courses were also arranged—a Vernacular course of practical agriculture, for zamindars' sons, one dealing chiefly with improved farm implements, for military overseers, and a five weeks' course of farm tuition for Assistant Commissioners. Eight out of 17 candidates were awarded diplomas. The educational attainments of the students who join are considered to be below the standard required, and it is suggested that the course should be lengthened. The College is in a critical condition. For the current year there is no first year class. The fact seems to be that there is no demand, outside the department, for licentiates in agriculture, and inside the department the salaries are too low.

Engineering Colleges.

358. The new Engineering School at Rasul was opened in April 1912; the number on the rolls was 98. The facilities in the neighbourhood of Rasul for practical training are found to be of great value, and the school has made a promising start. Engineering classes continue to be held in the Dayanand Anglo-Vedic College, Lahore, but the number of students shows an annual decline. Mechanical engineering is taught in the Hindu Technical Institute, Lahore, which had 57 students.

Veterinary College.

359. In the Veterinary College the demand for admission is very great, and the College is unable to provide sufficient graduates for the needs of the country. There were 181 students on the rolls, and the number in each class is about 60. Two European Professors in Imperial Service have been recruited and are training with the Provincial Veterinary Department until accommodation is provided in the new College, and the future classes are definitely decided on. New rules were sanctioned allowing the admission of 17 private and district board students from the Punjab—a class which was being crowded out by students from outside. The percentages of success in examinations of

the three years were 94·7, 81 and 86, respectively. Besides the ordinary work of teaching Veterinary Assistants, a class of dressers from the Transport Department was held during the summer vacation, and 50 men were trained : another class of 12 were trained as farriers. There was a satisfactory increase in the number of animals treated in the hospital, but the accommodation is inadequate for proper demonstration. A site for the new College has been selected and plans and estimates placed before Government. A Veterinary Association was formed during the year in order to stimulate the interest and improve the knowledge of Veterinary Assistants.

Industrial training.

360. The Mayo School of Industrial Art had 231 students. The large new workshops were nearly completed by the close of the year, and an additional staff is being engaged. A feature of the year has been the opening of carpentry and other industrial classes in ordinary schools. New board industrial schools have been started at Rewári and Dera Gházi Khan.

Reformatory School, Delhi.

361. There were 142 boys on the rolls of this institution, 6 of whom were out on license with private employees. The Superintendent reports that he can trace 60 out of 66 boys recently sent to their homes, of these only 8 appear to have relapsed. The future location of the school had not been determined at the end of the year.

Commercial training.

362. The Government Clerical and Commercial School (88 pupils) at Amritsar, and the Continuation Classes arranged by the Young Men's Christian Association (57) and the Young Women's Christian Association (36), continue to attract students.

Education of Indian Women.

Statistics.

363. There has been a further increase of ten per cent. in the number of pupils in girls' schools, the total now being 37,485. There are now 745 Schools against 669 last year, including 6 High, 32 Middle, and 707 Primary. In three schools, girls are prepared for the Matriculation Examination, and the Kinnaird High School has training classes. Middle Schools either follow the Code Scheme of Studies or on the lines of the Kanya Maha Vidyala, pay chief attention to languages, music, needlework and religious instruction. The primary schools are as a rule badly found in teachers and teaching materials. There is a large want of kindergarten teachers especially in Municipal schools. Instruction in needlework is well assimilated and cookery and ambulance work is also taught.

Buildings.

364. Grants for accommodation in girls' schools were specially given this year, and the next five years will, it is hoped, see a great improvement in this direction. The biggest institutions are well-housed, but they are few in number as yet.

Some results.

365. Including extra-provincial candidates, 21 girls appeared for the Matriculation examination, of whom 13 passed; six out of seven passed the Junior Anglo-Vernacular Certificate examination; eleven out of eighteen the Senior Vernacular Certificate and fifteen out of twenty-three the Junior Vernacular examination. In the Middle School examination 211 appeared, of whom 146 were successful.

Education of Special Classes.

Education of Europeans.

366. There has been no change in the number of schools: the number of pupils rose by 59 to 2,598, the real increase being apparently greater than this. The total expenditure was Rs. 8·48 lakhs against Rs. 7·69 lakhs last year. Provincial funds supplied 32 per cent. of this sum, and fees 36 per cent. The increased provincial contribution was largely due to an additional sum of Rs. 30,000 being spent in the form of staff grants, including subsistence allowances now given for the first time to members of religious bodies. The financial condition of the schools is improving yearly.

The pass percentage in the High School examination rose from 61 to 66, and in the Middle School examination from 38 to 50. Arrangements have been made to hold the Cambridge local examinations in the Province. There has been an improvement in the teaching of Latin and English, cooking and laundry work, etc. Provincial revenues contributed Rs. 28,444 to the building or improvement of nine schools, the total expenditure on buildings amounting to Rs. 71,685. The Cathedral Orphanages at Lahore were amalgamated with the Cathedral Boys and Girls' High Schools with consequent improvement in teaching efficiency. Altogether, there has been a satisfactory rise in the character of teaching and work generally, in the provision for teachers and buildings, and in the number of pupils.

Muhammadans.

367. The best schools in the Lahore division for Muhammadans are at Qadian and Amritsar: in Ráwalpindi and Multán Muhammadan schools have largely increased, but the lower classes are reported to be still apathetic even in a strong Muhammadan centre like the Multán Division.

Miscellaneous.

Text Book Committee.

368. The committee closed the year with a balance of Rs. 60,521. They considered no less than 641 publications, and recommended 320 as text-books or for school libraries and published 49 new books. Their own publications included an Urdu translation of Major Perry's "Life, Light and Cleanliness," an Urdu Primer and two Hindi Readers for girls' schools. Six thousand three hundred and seventy-five volumes were presented to school libraries and Rs. 3,500 given as rewards to authors.

Conference.

369. A conference on girls' education was held, after the close of the year. It lasted 3 days and 40 to 50 persons attended, mostly ladies. Various interesting discussions took place, and recommendations were made.

Aitchison College.

370. With a new year of 29 the boys now number 115, the age of the new boys averaging 11 years 4 months, which is more satisfactory than the previous year's average of 12 years 1 month. The average daily attendance has gone up from 87·4 to 94·7. The health of the boys was good, but there were three unfortunate deaths, not, however, due to any epidemic at the College. The inspection note shows that the Science teaching is poor, and measures are being taken to improve it. Ten students entered for the diploma, of whom six obtained it, while two passed in the aggregate but failed in two subjects, and two others failed altogether. One boy was second among the Chiefs' College entries, gaining also first place in two subjects. The Patiála Challenge Shield was wrested from Ajmer Mayo College, chiefly by superiority in cricket and tent-pegging. The temple and dharmsala are finished, two rooms in the boarding-houses being thereby set free for ordinary use. The marble floor of the temple was presented by Faridkot State, and the electric light and fans by Sardar Sohan Singh of Ráwalpindi, a student at the College. Electric light and fans have been placed in the boarding-houses and fans in the main building by using a sum of Rs. 10,000 set aside for a building fund in 1910. The financial position is satisfactory, the gain on the year's working being nearly Rs. 5,000.

55.—Literature and the Press.

Literature.

Books registered.

371. The actual number of publications registered has fallen by 33 to 1532, owing to several Urdu leaflets, etc., which cannot be properly classed as literature, not being admitted. Of the total number 1,079 were original works, 265 republications and 188 translations. There has been a lull in activity

since the Durbar year. The languages employed are chiefly Urdu (38·5 per cent.), Punjabi (34 per cent.) and English 7·3 per cent). : 9·8 per cent. of the works were issued in two languages. About one-quarter of the "Punjabi" books are more Urdu than Punjabi, being written by Muhammadans in Persian script and containing a large proportion of Persian and Arabic words.

Nearly one-third of the year's production is in poetical form, largely dealing with religious subjects. A national poem of some length by Dr. Shaikh Muhammad Iqbal and another called the Jawab-i-Shikwah are among the better class of Urdu works, while in Punjabi in the Persian character the best poems were "Bagh-o-Bahar," volume I, and two versified editions of the Ramayana. Miscellaneous works form 20 per cent. of the total and include books on moral subjects, social reform, domestic economy, hygiene and sericulture : also a descriptive account of the Delhi tombs by Muhammad Alam Shah.

Fifteen per cent. of the year's publications consists of prose works on religion,—a subject which is also extensively treated in poetry : much of it is controversial and reflects the prevalent diversity of faiths : translations of the classical languages used were numerous, and in almost all the vernaculars works were published to explain religious doctrines in the light of reason and science. Biography is generally crude and uncritical, but lives of Muhammad, Swami Ram Tirath and Raja Ram Mohan Roy are in good style and fairly comprehensive. The biographies of Tippu Sultan, Zeb-un-Nissa Begam (daughter of Aurangzeb), Prithvi Raj Chohan and Maharaja Ranjit Singh are in elegant Urdu, and full of historical interest.

The Urdu translation of Romesh Chandra Dutt's novel "Rajput Jiwan Sandhia" deals with battles fought by the Mewar Rajputs against the Mughal Kings, and two novels based on the Ramayana and Mahabharata are of unusual merit. There was a rise of eleven in the number of novels brought out during the year, mostly original works. Historical publications decreased slightly and most of them are text-books or epitomes ; the few readable books include "Mukhtsar Tarikhi-i-Punjab" by M. Firoz-ud-din and Thakar Ichhar Chand's Urdu-translation of Pandit Kulhan's Sanskrit history of Kashmír. Among books on language are a series of Arabic Readers compiled in Syria and published at Delhi and a new Persian grammar written under the auspices of the Text-book Committee by Qazi Mir Ahmad Shah, all of which display novelty of method. Under the head of Law, a book on the customs of the Punjab by Mr. Badr-ud-din, Barrister, has been approved by the Chief Court : while of medical works, a valuable translation has been made by Lala Ram Kishen of Sir Bhagwant Singh's work on the history of the Aryan Science of medicine. Of the four books of travel, Sardar Muhammad Shahzad Mir Khan's account of 20 years' travel in Central Asia, China and Africa deserves mention, while two translations give in Urdu Burton's "Pilgrimage to Almedina and Mecca" and the accounts of ancient India by Megasthenes and other Greek travellers. The only philosophical work in English is Swami Ram Tirath's "In Woods of God Realization," three volumes, discussing Hindu Vedantism in the light of present-day Science. Books of a political character have almost disappeared, and this year only two such works were published, one in Punjabi on the blessings of British rule and one in Urdu, a translation of a Japanese work on the future of the British Empire.

56.—Literary Societies.

[*Vide* pages 196 and 197 of the Administration Report for the year 1911-12.]

57.—Arts and Sciences.

The Lahore Museum.

372. The number of visitors has more than doubled in the last five years and reached 389,743 during 1912-13, with a daily average of 1,110. The twelve purdah days recorded 5,523 or 1,997 more than last year, while on the

Attendance.

Chiraghan Mela (March 31st) 6,331 persons passed the turnstile. The question of reserving a day for students is put forward by the Curator. There is no doubt that the public are rather inclined to treat the Museum as a playground, and that study is impossible so long as strict quietness is not maintained. Assistance is also required in improving some of the sections, notably the Zoological, and educated interest would be cultivated by the provision of student days.

Additions.

373. Few antiquities have been added, but the Superintendent of Hindu and Buddhist Monuments has supplied clay and *papier maché* images of Sakyamuni and other deities of Tibet, and a few articles of copper and wood from the same region. A representative collection of Nepal brass work has been purchased. No special additions were made to the coin collection except 285 coins found and procured through the Treasure Trove Act; and a small collection of Mughal coins was purchased. Twenty-seven old pictures and drawings were bought, some of which are of great value for their fine workmanship and some for historical events, *e.g.*, one represents Raja Prithiraj piercing the Emperor Shahab-ud-din Ghori at his palace at Ghazni. The King-Emperor's tiger has been received from the taxidermists, and a special case is being designed for its display. Numerous gifts of birds and animals are annually received from the Zoological Gardens, which cannot be set up, as there is no taxidermist attached to the Museum. The collection of tanning materials has been added to, and Captain Rybot has presented a collection of fossils from the Kharian sandstone near Jhelum.

Work of the Museum.

374. The cataloguing of the coins by Mr. R. B. Whitehead, C. S., is nearing completion in England. That of the sculptures is still proceeding. Mr. S. M. Gupta has consented to classify a note on the Persian, Mughal and Kángra paintings. The Applied Art Section has also been re-arranged by the Curator, so that the process of manufacture is seen in the same cases as the finished article.

Finance.

375. The total expenditure during the year was Rs. 17,786, including a specially sanctioned charge of Rs. 8,250 on account of printing charges of the coin catalogues.

Lantern lectures.

376. The Society for Promoting Scientific Knowledge used the hall on five occasions, the expense being borne by the Museum. The Curator arranged 17 lectures, three of which, however, had to be postponed. The remainder were very much appreciated. They included two purdah lectures, and a series of four on Indian Art, the latter by Mr. S. M. Gupta. The attendance averaged 173. A new feature was the starting of lantern lectures in city centres, nine being delivered at Lahore and two at Jullundur. One hundred and twenty-seven sets of slides were borrowed, both inside and outside the Province, and 382 slides were added to the collection. The grant of Rs. 1,500 being insufficient to cover the year's expenses, Rs. 80 was charged to next year's lantern grant.

The Press.

Newspapers.

377. The total number of English, Anglo-Vernacular and Vernacular newspapers published during the year 1912 was 256, of which 11 were Hindi, 25 Gurmukhi, 173 Urdu and 45 English. The corresponding number for the preceding year was 248. There was, however, a slight decrease in the average periodical circulation (obtained by combining the average circulations of all papers), the figure for 1912 being 280,272 as compared with 287,641 for 1911.

The large increase in circulation during 1911 was explained in last year's report as being partly due to the Coronation Darbar, and the termination of that function and its attendant stimulus to the sale of Punjab

periodicals more than accounts for the slight decrease during the year under review. The principal centres of publication were Lahore, Amritsar and Delhi. The Punjab capital was well ahead with 147: the other two cities claiming 32 and 31 respectively.

Circulation.

378. The principal Indian-owned papers published in English were the two Hindu organs, the *Tribune* (1,924) and the *Panjabee* (2,064), the two Muhammadan publications, the *Observer* (1,200) and the *Comrade* (2,900), and the Sikh organ of Amritsar, the *Khalsa Advocate* (700). The principal vernacular papers were the *Hindustan* (14,900), *Zamindar* (daily 12,000; weekly 6,573), *Sufi* (8,478), *Curzon Gazette* (7,313), *Paisa Akhbar* (weekly 7,296), *Fauji Akhbar* (6,000), *Watan* (5,093), *Vakil* (3,213), and *Parkash* (3,088), and the *Loyal Gazette* (2,058).

Executive action.

379. The total number of declarations under sections 4 and 5, Act XXV of 1867 reported during 1912 was 118, but the actual number is probably slightly higher. Security when taken ranged from Rs. 500 to Rs. 2,000, but in many cases no security was demanded. The only paper whose security was confiscated during the year was the "Punjab Advocate," the sum of Rs. 2,000 deposited by it in June 1911 was confiscated in July 1912, whereupon the paper ceased to exist. This was the first case in the Punjab necessitating the confiscation of security under the Press Act. No press prosecution took place during the year.

Warnings at the request of the Local Government were issued to the publishers of two papers only, *Arya Patrika* and the *Hindu*. The District Magistrate of Lahore also warned the proprietors of seven presses for neglecting to comply with the provisions of Act XXV of 1867, regarding the printing of the names of printer, publisher and place of publication on printed matter issued from their presses.

Foreign Politics.

380. Interest centred chiefly on the Wars in Tripoli and the Balkans. The Muhammadan Press was greatly perturbed at the defeats of the Turkish forces, and the extremist section were taken to task by the Hindu Press for their immoderate denunciations of European powers. A calmer attitude was adopted towards the end of the year by the Muslim newspapers.

Domestic.

381. Treatment of Indians in the Colonies, particularly in South Africa and Canada, received attention from all sections of the Press. As in the previous year, the *Jhatka-Halal* and kine-killing questions led to recrimination between the less responsible Hindu and Muhammadan papers, which also discussed with some heat the tribal raids into British territory. The better informed papers devoted themselves to the Nicholson Committee in which much interest was displayed.

Legislation.

382. The Bills before the Punjab Legislative Council came in for a considerable amount of criticism. The Land Alienation Act also continued to arouse the dis-satisfaction of the Hindu Press, and several Muhammadan papers discussed suggestions for the restriction of usury. Mr. Gokhale's Education Bill, the Life Assurance Societies Bill, Mr. Madge's and Mr. Dadabhoy's Bills for the suppression of vice, and the Punjab Tenancy Amendment Bill also received a certain amount of discussion.

Political organizations.

383. There was very little controversy during the year over Hindu and Muhammadan political movements. The *Tribune* noticed a tendency on the part of Muhammadans to aspire to some form of self-government, and looked forward to a time when the Muslim League would merge into the National Congress. Both communities showed little enthusiasm over their Provincial Leagues, towards which they adopted a critical attitude. The Hindu Press deplored the ineffectiveness of the Punjab Hindu Sabha and was in favour of the inception of an All-India Hindu League. The

Khalsa Advocate strongly urged the formation of a similar association for the protection of Sikh interests, arguing that failure to unite and co-operate incurred the risk of re-absorption into the Hindu community.

Educational.

384. The Muslim papers expressed much disappointment at the limitations imposed by Government as a condition of the grant of a charter to the Muhammadan University. The Hindu Press however did not display much enthusiasm over the proposed Hindu University. The Sikh organs discussed with much interest the Sikh Educational Conference.

The Durbar.

385. For some months after the Durbar the tone of the Press was more conciliatory and the transfer of the capital to Delhi was approved by all parties. The annulment of the Partition of Bengal was universally applauded by the Hindu papers, but the Muhammadan organs were full of forebodings, regarding the measure as a concession to Bengali agitation.

Miscellaneous.

386. As usual the Police attracted much criticism from all sections of the Press. There was also a remarkable unanimity on the principle of communal representation in the public services. The Muhammadan vernacular papers interested themselves in the hardships of pilgrims to the Haj, while the announcement of the appointment of a Public Services Commission received due attention from the principal Hindu Journals. Temporary interest was aroused by the Khan of Hoti case, which gave rise to much discussion of the action of the Frontier authorities.

CHAPTER VIII.

ARCHÆOLOGY.

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Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1913, also in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1912-13.

58.—Archæology.

Hindu and Buddhist Monuments.

Notifications.

387. Only one monument was notified during the year, namely, the gateway in front of the temple of Malot in the Jhelum District.

Surveys and repairs.

388. The listing of the monuments of Kulu, Mandi and Suket was completed, and also of most of those of Kangra Proper. The lists were not, however, sent to the Press during the year under report. In Kangra Proper, among other objects of historical interest, a manuscript was acquired dealing with the history of the Rajas of Haripur near Goler: and the rock-cut temples of Masrur which are the only known specimens in the Punjab were surveyed. The sum of Rs. 1,011 only was spent on annual repairs of monuments. The failure to execute special repairs is due largely to the greater abundance of pre-Moslem remains in the Gangetic plain, but the want of a complete list of monuments in the Punjab, and of conservation notes on those already listed, renders it impossible to spend on Hindu and Buddhist monuments in the Punjab sums granted for that purpose.

Museums.

389. The cataloguing of the coins of the Lahore Museum and the Gandhara sculptures was continued by Mr. Whitehead, C. S., and Mr. Hargreaves, respectively.

Exploration at Taxila.

Disposition of the site.

390. Only three months' excavation work was found possible at Taxila, but the results obtained were epoch-making in the true sense of the word. Dr. J. H. Marshall, C.I.E., the Director-General of Archæology, is in charge of the work, and a rest-house has been built for him close to the site. The finds have been numerous and important, and were described by the Director-General in a lecture delivered at Simla in September before the Punjab Historical Society. The ruins of the three cities which lie beneath the mounds of Taxila, some 20 miles north-west of Ráwalpindi, measure a dozen square miles, and their proper exploration will be a work of many years. The three areas are named (beginning from the south) Bir, Sir Kap, and Sir Sukh, and represent three successive capitals of Kings or Emperors from the 4th century B. C. to the 4th century A. D., namely, the Macedonian Alexander (326 B. C.), the Mauryans Chandra Gupta and Asoka, the Bactrian Diodotos, son-in-law of Antiochos the Great (190 B. C.), and his successors, the local Parthian Kings Maues, Azes, etc., (to 75 A. D.), and the Kushán Kings, including the celebrated Kanishka. Work was started at four points and the following paragraphs give a brief resumé of the antiquities discovered by these trial diggings.

The Chir Tope.

391. The Chir Tope on the south-east corner of the site had already been partially explored 50 years ago by Sir Alexander Cunningham, but newer methods and fuller knowledge have led to the discovery of the base of the main *stupa* and the remains of several small *stupas* of later date around it: also of still later gateways opposite the steps of the Great Tope and of a circle of small chapels, similar to those at Jamalgarhi on the North-West Frontier. Again other *stupas* and chapels were found built over these in another style. There are thus four styles of architecture at the Chir Tope, whose chronology covers a period of four hundred years from the days of the Parthians (2nd century B. C.) to those of the Kushán Kings. The Greeks, however, were the first builders at this site, for a collection of coins of a Greek King (all of a hitherto unknown type) were found under the Buddhist buildings. The Kushán coins were found *above* the Parthian remains, though some authorities have hitherto held that they flourished before the Parthian period. An apsidal temple (which is a rarity in India) was also laid bare, and several hundred specimens of Gandhara sculptures were found, of a manifestly late style, together with about 200 heads or figures in plaster or terra-cotta, including some life-size terra-cotta heads which are probably the only specimens of their kind in India.

Sir Kap site.

392. At Sir Kap a trench was dug across the site north and south, and was found to coincide almost exactly with a main street of the buried town. On the east side of the trench several large buildings were partially excavated, in two of which were shrines which had been erected about 50 B. C., the date being indicated by a stone relic casket which was found, enclosing one of gold and several precious stones, together with six coins of Azes I. These shrines are quite unique, the bases are well preserved and the upper structure of ornamental work was found lying about the court-yards. A third building dates from the 2nd century A.D., and below it were found rooms of Parthian construction, in which an ivory pendant of Hellenistic workmanship was picked up. In a still lower stratum were the remains of a building of the second century B. C. It seems to be established that Sir Kap was founded in the Greek period, and occupied by Parthian Kings and by Kozoulo-Kadphises, the Kushán. Later the capital was transferred to Sir Sukh and Sir Kap was probably given over to monks. No coins of Kanishka or his successors were found at Sir Kap, though the trench yielded 600 coins dating from Agathocles to Wema-Kadphises.

Jhandiala mounds.

393. At Jhandiala, half a mile northwards from Sir Kap, are two mounds the eastern of which yielded up the ruins of an imposing temple measuring 180 feet by 50 feet, and unlike anything hitherto known in India. The walls date from the 2nd century A. D., and there is every probability of rich finds awaiting the explorer in the artificial soil beneath the ruins. Two other smaller mounds further on were cleared, and disclosed two *stupas* of the Parthian epoch. The débris above these contained coins of Soter Megas, a nameless king contemporary with Wema-Kadphises; and in the spoil earth thrown out by General Cunningham's diggers was found a small silver casket enclosing one of gold with a relic bone inside.

Bir mound.

394. The investigation of Bir mound was very limited, but a small treasure was obtained in the shape of 160 punch-marked coins of debased silver, a very fine gold coin of Diodotos, gold and silver jewellery (two pieces being of exquisite workmanship) and a large number of precious stones. This treasure must have been hidden in the ground about 250 B. C., and there were also found some 50 vases in a well, dating from the Mauryan period. Below, however, is a large depth of artificial accumulation which will no doubt yield remains of a yet earlier civilization.

General results.

395. The result of the preliminary excavations is that the general disposition of the site has been settled, together with the ages of the several settlements in the city of Sir Kap, to which the settlements on the Bir mound have been found to be anterior, a number of monuments of the Parthian and Kushán epoch have been recovered, and a series of landmarks obtained, which were much needed for the history of architectural development. The prevailing spirit of the Parthian architecture has been shown to be Hellenistic, the Indian elements being subsidiary, and the Parthians must have played a prominent part in the diffusion of classical ideas in India, thus intimately affecting the evolution of early Indian art. It is also possible to determine the dates of other monuments found in the Punjab and on the Frontier, and the numerous sculptures discovered help to fix the chronology of the plastic arts. It is now known that the prevailing religion of the Parthian epoch was Buddhism which Kanishka can no longer be supposed to have established in the north-west of India. Clear evidence of the sequence of Greek, Parthian and Kushán dynasties has been obtained, and more and more interesting finds may be confidently expected in the near future.

British and Muhammadan monuments.

396. Certain works in the Delhi Fort were completed at an outlay of Rs. 38,829, also the water-supply of the Hayat Bakhsh garden, as well as fencing the proposed extent of the garden. The improvements to the ground attached to Nur Jahan's tomb at Shahdara (Lahore) were carried out, and in Lahore the restoration of the façade of the Badshahi Mosque and improvements to the Hazuri Bagh were continued. The report of the Superintendent of British and Muhammadan monuments for 1912 had not been received when this volume went to Press.

CHAPTER IX.

MISCELLANEOUS.

59.—Educational Jurisdiction.

[For this section reference should be made to pages 201 to 207 of the Report for 1911-12.]

60.—Ecclesiastical.

397. During the year a grant of Rs. 910 was made by the Local Government to the Anglican Church at Khanspur (Murree Further Gallies) as compensation for sittings provided in the church for Church of England soldiers attending the services. Departmental charges amounting to Rs. 949, leviable on the private subscriptions to the building of an Anglican Church at Lyallpur, were remitted. At Subathu a proposal to convert the existing school into an unconsecrated church and to build a new school in its place at a cost of Rs. 14,493 was approved by the Government of India.

61.—Stationery.

398. The value of stationery issued by Stationery Department at Calcutta to offices in the Punjab during 1912-13 was Rs. 68,014 and to Presses Rs. 1,31,738, making a total of Rs. 1,99,752 for the year. The value of supplies to offices was below the allotment by Rs. 50,725, and that to Presses in excess by Rs. 10,138, resulting in a net saving of Rs. 40,587. This is reported to be due to the fact that many offices could not draw their annual supplies owing to a change of the indenting period ordered by the Government of India in the Commerce and Industry Department.

62.—Punjab Government Press.

399. The following statement compares the income and expenditure with the value of the work turned out during the years 1911-12 and 1912-13 :—

	Income.	Expenditure.	Value of outturn.
	Rs.	Rs.	Rs.
1911-12	28,897	2,00,318	1,57,677
1912-13	27,279	2,13,892	1,56,459

The income which had been steadily increasing for four years has now decreased by over 5 per cent., while the expenditure has risen by more than six per cent., the value of the outturn declining by less than one per cent. The cost of work done by the contractors for Government Printing for departments and offices during the year amounted to Rs. 39,887 as against Rs. 49,247 last year.

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1913-1914.

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1913-1914.

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REPORT

ON THE

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OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1913-14.

PART I.

GENERAL SUMMARY.

(The "year" throughout this report is not invariably the financial year ending 31st March 1914. At the heading of each chapter, with the exception of chapter I, a reference is given to the departmental reports which contain details of the subjects dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the "year" in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1914, in chapter II it is the revenue year ending 30th September 1913, and in chapters III and VI it is the calendar year ending 31st December 1913.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

CHANGES IN THE ADMINISTRATION.

Personnel.

1. Sir Louis Dane, G.C.I.E., C.S.I., D.O.L., held charge of the office of Lieutenant-Governor of the Punjab till 26th May 1913, when he retired from the service and was succeeded by Sir Michael O'Dwyer, K.C.S.I.

General.

2. A scheme for the re-organization of the higher branch of the judiciary of the Province has been sanctioned, the court of the District Judge as hitherto known to the Province disappearing and the position of District and Sessions Judges being assimilated to that occupied by these Judges in the older "Regulation" Provinces. Simultaneously with this change a re-grading of the superior Executive Branch of the service was introduced, under which the number of Deputy Commissioners was increased by nine so as to include in the regular cadre certain seconded posts; an improvement in the grading of Deputy Commissioners by placing 14 in each grade was at the same time sanctioned.

Relations with Tributary States.

3. The most important facts in the political administration of the year were the withdrawal of the Baháwalpur State from the Phulkián States Agency, and the formation of a new Political Agency for the States of Baháwalpur, Máler Kotla and Farídkot.

There were few events of striking importance in the history of any of the States, perhaps the most important being a change in the form of administration of Patiála where the Prime Minister and Home Minister retired and the administration was taken over by six Secretaries acting under the direct supervision of the Maharaja.

Frontier Affairs.

Baluchistan.

4. During 1913-14 the Baluch Border gave no trouble, though the number of cases for disposal by Jirga, both civil and criminal, increased.

Condition of the People.

5. The year was on the whole a prosperous one. Both harvests were good, except in the south-eastern part of the Province; high prices prevailed and wages were also high; the birth rate was higher than in any year since 1900, and the death rate only slightly exceeded that of the exceptionally healthy preceding year. The mortality from plague diminished very greatly and that from fever was normal; an epidemic of cholera occurred, but, though widespread, it was localized in intensity and was kept in check; the small-pox epidemic, which was a legacy from the previous year, was the only serious one.

In towns credit received a severe shock from the failure of several well-known Indian banks and the consequent failure of many companies; the effect of this financial crisis will be felt for a considerable time, though the crisis will give a much needed check to rash enterprises and investments. One bright feature of the storm was the fact that no Co-operative Credit Society or bank was wrecked in it which shows the stability of this modern form of village communal life.

Administration of the Land.

Land Revenue.

6. The fixed land revenue demand of the Province is just under 213 lakhs and more than 97 per cent. of this was collected—a fact which proves that the resources of the zamindars in recently re-assessed districts are fully capable of meeting the increased demand.

The fluctuating land revenue, partly owing to re-assessments of colony areas and partly to favourable river floods, again shows a large increase, having risen from 87 to nearly 110 lakhs. This continued increase is one of the most remarkable features in recent land revenue history; in 1892 the fluctuating land revenue was only $\frac{1}{20}$ of the fixed land revenue, in 1901 this proportion had increased to $\frac{1}{9}$, in 1911 to $\frac{1}{4}$ and now stands at more than $\frac{1}{2}$, practically all of which was collected, a fact which bears eloquent testimony to the leniency of the demand and the efficiency of the collecting agency. The smooth running of the machinery for collection is a matter which is liable

to escape notice, but may be realized when it is considered that in only 11 cases was it found necessary to resort to imprisonment and in only 38 cases to resort to the sale of property, 36 of these being sales of moveable and 2 of immoveable property.

Settlement, Survey and Land Records.

Settlements and Land Records.

7. Ten settlements were in progress during the year and those which were completed resulted in substantial increases of revenue. The new assessments were easily met, and the value of land shows a steady and substantial rise. The Survey Department continued its useful work in riverain tracts and in providing frame-works for subsequent cadastral survey.

The general revision of the land records of a district has always been a part of a Settlement Officer's duties, but, with a view to minimising the expense and duration of settlements, it was thought advisable to try the system of having maps corrected and records revised in districts about to come under settlement before the Settlement Officer entered upon his duties. This system has been found impracticable and in some ways undesirable, as the revision of the records is one of the main ways by which a Settlement Officer comes into touch with the people and is regarded as their representative as much as the representative of Government. Reciprocity between the settlement and the ordinary land revenue staff, however, has always existed and a recent development of this is the introduction of the scheme known as amalgamation of the district and settlement kanungo staff, under which some candidates for posts on the district kanungo establishment are trained in the Settlement Department.

An interesting experiment in decentralization on a small scale is being tried by conferring limited powers of attestation in mutation cases on kanungos employed in settlement.

Canal Colonies.

8. The Lower Chenab, Lower Jhelum and Chunian Colonies continued to prosper, though the cultivated area on the Lower Chenab fell off slightly owing to the early cessation of the monsoon and perhaps also to the abolition of the system of "kharaba," under which land revenue and canal dues were not levied if the crop failed to mature; this system encouraged gambling on rain, the cultivator tending to sow more land than he could possibly hope to mature by means of canal water and a normal rain supply, and its abolition naturally affected the extent of the area cultivated.

Allotment in those colonies is now almost at an end, and though still presenting features in administration which require special attention, their administration is assimilating more and more to that of an ordinary district. It is in these new colonies that enterprise and a progressive spirit should specially appear and this is evident in the rapid progress of the co-operative movement in all three, in the establishment by private enterprise of towns such as Warburton and Nankána and in the success of the Zamindár Trading Company in the Lower Jhelum Colony which sold 87 lakhs worth of grain during the year. Re-assessment on the Lower Chenab has resulted in a substantial increase of revenue, and the re-assessment on the Lower Jhelum has been accepted without demur.

Some laxity in the fulfilment of conditions on the part of service grantees has been firmly but sympathetically dealt with, and an improvement has taken place.

Preliminary work in the Lower Bari Doab Colony is proceeding, colonization has been begun on the Upper Chenab, and the Upper Jhelum Colony scheme has been submitted to Government.

Court of Wards.

9. Passing from enterprises started by the State, another feature of paternal government is found in the management of estates under the Court of Wards. No new estates have been taken under management, but three have been released, each with a large surplus and all debts paid up. Apart from these, the total liabilities of the estates under the Court are less by Rs. 1,61,000 than they were last year. In the management of such estates Government have excellent opportunities of giving actual illustrations, apart from mere advice, of what can be done by new developments, as, for instance, in sheep, horse and cattle breeding and in fruit culture. In all these ways progress has been made during the year, and one specially enterprising estate has started a grain market and also a tenants' co-operative society and a weaving school.

Revenue and Rent-paying Classes.

10. The general prosperity of the agriculturist has already been alluded to. The growth of the co-operative movement is dealt with below, and it is here only necessary to note the steadily increasing tendency among agriculturists to utilize advances from co-operative societies for the purposes to which Government loans are generally applied, and the continued beneficial effect of the Land Alienation Act in confining the interest of non-agricultural tribes in the land to temporary occupation, while there is no evidence to show that the Act is working mainly in the interests of large investors who are members of agricultural tribes.

Protection.

Police.

11. Though poverty is one of the chief incentives to crime, it by no means follows that economic prosperity at once results in the creation of a law-abiding spirit. This is especially so in a country where party feeling is still rife and where the attempt of Government to eradicate oriental methods of investigation has not yet been followed by the development on the part of the public in general of a feeling of their responsibility to help in the prevention and detection of crime. Though the deplorable increase of crime of recent years has at last apparently received a check, yet the situation is still serious, there having been an increase in the number of murders and only a slight decrease in the number of dacoities which are still three times what they were in 1909; cases of assaults on the police and other officials while in execution of their duties are also still much in evidence. Measures have been taken to cope with the situation by strengthening the mounted police force and by establishing new police stations and posts, the cost of many of these being defrayed by punitive cesses. Special attention is also being paid to strengthening the prosecuting agency and to accelerating the disposal of cases, as it is recognized that there is a relationship between the number of convictions and the speedy disposal of cases. The statistics of

cognisable cases against the State and the person and property of individuals returned as true show that only 44 per cent. were brought to trial and of these only 68 per cent. resulted in conviction, while of these again many are reversed on appeal. These statistics are, however, on the whole, somewhat better than last year, and there has been a marked rise in the percentage of convictions in murder cases. Proposals for the amendment of the law, particularly of the security sections, have been made in several quarters and the introduction of the Frontier Crimes Regulation to the trans-Jhelum districts has also been recommended. If the situation does not improve, these proposals will be taken up.

Criminal Justice.

12. This subject overlaps the above paragraph, and only a few other matters fall to be noticed in connection with non-cognizable crime and the working of the courts.

On the whole, including both cognizable and non-cognizable crimes, there has been a reduction in the number of offences reported and also of true cases; and there has been an improvement in the proportion of cases brought to trial, while the percentage of cases resulting in conviction or compromise has increased from 70 to 71, the percentage of convictions alone being 36 or, after allowing for releases on appeal, about 26.

Matrimonial offences and connected questions, except where they are accompanied by acts of violence, do not come within the cognizance of the police, but are still much too common, though the number of cases returned as true has sunk from 6,244 to 5,650. The movement in favour of registration of marriages is spreading, but definite measures on a large scale cannot be taken till public opinion supports the measure.

The Labourers' Act (XIII of 1859) has again come in for much criticism, but the Chief Engineers in both branches of the Public Works Department have given their opinion in favour of its retention. The working of this Act has, however, to be carefully watched, as its objects are often misunderstood and it tends to become an instrument of tyranny in the hands of unscrupulous contractors.

Something has been done since the close of the year to remedy a very frequent cause of complaint by raising the rates of diet money payable to witnesses.

Prisons.

13. The increase in crime in the last few years and the tendency towards longer terms of imprisonment has strained the available accommodation in the jails, and proposals for the construction of a new central jail at Jullundur are now before Government. The daily average population of the jails has this year amounted to 13,613.

The methods of jail administration have been changing in recent years, the tendency being to induce prisoners to do good work by the hope of rewards in the shape of remission rather than to coerce them to work by the threat of punishment. This change in method has resulted in a large decrease in the number of prison offences which have dwindled to 29,461 as compared with 33,724 in 1912 and 56,837 in 1908. The efficiency of work does not seem to have suffered and the prisoners

thoroughly understand the remission system. While such humane treatment has a humanising influence over many convicts, the punitive and deterrent aspects of punishment must also be kept fully in view.

A humane and reformative treatment is much more likely to have a permanent effect on adolescent prisoners, and this is recognised in the Borstal Central Jail at Lahore for adolescents where reformation is the key-note of administration. Nearly a thousand young men are kept in this jail and progress has been made in the application of Borstal methods, though much yet remains to be done before the institution can be regarded as complete, and it is still too early to discuss the results of this experiment.

Civil Justice. 14. Civil litigation has been slightly less than in 1912-13, though the volume of work in the Chief Court shows no tendency to diminish. The decrease has been almost entirely in suits for money or moveable property, and the fall in the number of such suits in certain districts where co-operation flourishes is remarkable and seems to indicate that the existence of these societies is the cause. Another point of interest is that suits brought by money-lenders and shop-keepers against agriculturists have dwindled from over 100,000 in 1912 to 68,500 in the present year; this is a healthy symptom and a practical vindication of the policy of the Land Alienation Act.

A special feature of the administration of the Punjab has always been the inter-connection between the departments of Government, Assistant Commissioners, for instance, always receiving a training in civil work, even though they may be destined for executive work; as a corollary a scheme is now being brought into operation for the training of Munsifs in the details of revenue work.

The Pre-emption Act of 1913 and the Insolvency Act are not working successfully; in regard to the first, it has not yet been sufficiently long on its trial to justify any steps for its alteration, but in regard to the second, a special report about the abuses in its working is being submitted to Government.

Registration. 15. The prosperous state of the Province is well reflected in the registration returns which, not only in the decrease in the number of optional registrations of sales of immoveable property under Rs. 100 in value, but also in the average price paid in more important transactions dealing with both urban and agricultural land, show the rise in the value of the land; this average price per transaction in the case of agricultural land stands at Rs. 955 in the present as compared with Rs. 805 in the previous triennium.

The number of registrations of sales and mortgages has not varied much in the last three years, except in the case mentioned above, but a steady rise in the number of leases of immoveable property (perpetual leases having risen during the triennium from 387 to 602) is being investigated, as it is suspected that alienations which are really mortgages are often shown as leases in order to defeat the provisions of the Land Alienation Act.

LOCAL SELF-GOVERNMENT.

16. In last year's report it was pointed out that the interest of members in the work of district boards must depend largely on the power and influence they can exercise, and that again depends largely on the resources of the boards. This year owing to re-assessments of local rate and to increased subventions from Government there has been again a large increase in income from 64·5 to nearly 79·4 lakhs which is nearly 50 per cent. greater than two years ago. The interest of members has been further stimulated by the development of sub-committees in many districts; by pursuing this policy of decentralization and by placing circles in charge of individual members a valuable educative effect is being produced. This effect has extended to the public also as is, for instance, evinced by increased interest in elections, though this is still far from uniform or consistent. Another step in developing initiative in local bodies is in the policy that grants-in-aid should be general rather than ear-marked. District Boards.

The chief heads of income which benefited by the large subventions from Government were education and civil works, the increases being nearly 4 and 6 lakhs respectively; expenditure kept pace with the receipts and, in the case of education at least, was supplemented by subscriptions raised locally, particularly in the colony districts.

Veterinary dispensaries continued to gain in popularity in the greater part of the Province, though they appear to be making little headway in the northern and south-western districts, and interest in various other works of improvement such as cattle-breeding and arboriculture has been fully maintained. In regard to special enterprises there is little to record except the starting of a demonstration farm by the Sialkot Board and the intention of the Gujranwala and Karnal Boards to found industrial schools.

The year as a whole may be characterised as progressive and encouraging both in the work done and the interest shown.

17. Municipalities have also benefited by increased subventions from Government and by re-adjustments in taxation, their income having risen from 66 to nearly 76½ lakhs, but expenditure has increased by less than 5 lakhs. The small increase under education is disappointing, as it shows that in many cases the educational grants from Government have been simply used to set free for non-educational purposes sums hitherto spent on education. Municipalities.

It is in urban communities that interest in representative Government may be expected to develop, but, though municipal elections seem to be raising a little more interest every year, it is still only in a few of the larger municipalities that marked enthusiasm is shown. The lack of interest often displayed in primary education and in sanitary administration (as distinct from the construction of sanitary works), and the continued prevalence of cumbrous forms of taxation, such as octroi, indicate a considerable room for improvement. There is, however, a tendency for better men to come forward as candidates at elections; the sub-committee system is successful here as in district boards; and it

has been found possible to appoint non-official presidents in a considerable number of committees. Another hopeful sign of the times is the fact that many committees are considering proposals for the reform of taxation. The system of terminal taxation has found some support, as it possesses the advantages of octroi without its disadvantages; such a tax has already been sanctioned for Sargodha, and proposals from three other municipalities are under consideration.

Considerable attention is now being given to urban sanitation. Government recently issued a resolution enjoining the employment of qualified Health Officers and Sanitary Inspectors in the large municipalities, and has instituted a class for training Sanitary Inspectors. A resolution has also been issued dealing with town-planning and the extension and improvement of congested and insanitary areas. Municipalities are, as a rule, prevented by lack of funds from taking up any large scheme of this nature, but it is gratifying to observe that the Amritsar Committee are endeavouring to deal with some more congested parts of the city, while in Gurdaspur land has been taken up for a town-planning experiment.

Though the working of several committees still leaves much to be desired, yet a genuine public spirit is undoubtedly developing, especially in larger towns, where the committees not only do good work within their own spheres of duty but also show a willingness to co-operate with the administration in other matters relating to the well-being of their communities.

Agriculture, Weather and Crops.

Agricultural Department.

18. The Agricultural Department, which has recently been strengthened by the appointment of two more Deputy Directors and an Agricultural Engineer, has many functions to perform, which may roughly be summarised as investigation, education and popularization; these functions often overlap each other.

Owing to adverse climatic conditions the year was unfavourable for experimental work with regard to wheat, but investigations in connection with the wheat weevil, the cane-borer and other pests were continued.

In education, in the technical sense of the term, there has been little progress and the small influx of students to the Lyallpur College forms a curious contrast to the competition for entrance at the Veterinary College. Measures have been taken, however, to shorten and cheapen the course as far as is consistent with soundness of training. In particular, a six months' vernacular course intended to give practical manual training in the use of improved agricultural implements has been introduced, and this is attended by the sons of genuine agriculturists, the class *par excellence* whose co-operation it is desirable to enlist. It is to be hoped that this course, which has been introduced as a side issue, may ultimately prove to be one of the most practically important branches of the department's operations. Apart from this course, the college may be regarded practically as a training place for members of the Agricultural Department.

The work of popularization is conducted by means of occasional demonstrations of implements at fairs, by leasing land on favourable terms or by granting similar facilities to those who are willing to undertake to experiment with special kinds of seed or implements recommended by the department, and, thirdly, by means of agricultural associations with agricultural assistants to help the members, each of whom is required to carry out some agricultural operation or to use some improved implement in the way recommended by the department. In these ways a great deal is being done; for instance, a lease of 3,000 acres on the Lower Bari Doab Canal has been granted on condition that the lessee grows 400 acres of American cotton every year for seed and also grows other seed for the department, and another lease of 2,000 acres has been given on condition that the lessee cultivates the land by a special kind of steam plough. There are five district agricultural associations, and each consists almost entirely of leading land-owners and so, being to a great extent non-official, these societies are able to serve as interpreters between the department and the people. Many co-operative credit societies have also helped the progress of agriculture in similar ways, as by stocking Meston ploughs or by arranging for members to grow varieties of seed considered specially suitable for the locality concerned. It may be found eventually that these sturdy societies which are the new embodiment of the communal spirit in villages will do better work as missionaries of the aims and objects of the Agricultural Department than can be done by the multiplication of special district societies not particularly connected with village communal life.

In fine, though progress may for long be slow, for there is much to learn as well as much to teach, and though progress cannot be measured in concrete terms by the intervals between annual reports, yet both in the work done and in the active interest aroused in recent years, there is much cause for optimistic reflection on the future of the department.

19. No better proof that the Veterinary Department is winning the confidence of the people could be forthcoming than the fact that many private individuals have come forward to establish Veterinary hospitals. Wherever such hospitals are made and properly equipped by local bodies or private individuals, an addition to the staff of Veterinary Assistants is sanctioned and the cost met by Government. The growing popularity of the department and of its work is seen, on the one hand, by the steady stream of pupils to the Veterinary College which has necessitated the new buildings now under construction and has created a demand for a second college in Northern India, and, on the other hand, by the largely increased number of animals treated by the veterinary staff on their tours. These tours also serve another purpose, in that they are the best method by which the potentialities of the department are demonstrated to the people. Direct demonstrations and lectures have also been resorted to in villages with considerable effect. Veterinary Department.

The Hissar Cattle Farm has suffered from a partial failure of the rains for the third year in succession, which means not only increased expenditure on the keeping of animals but also risk to stock. The

number of bulls issued (637) is, however, the highest on record, difficulty having been experienced in meeting the large demand.

Co-operative Credit Societies.

20. The year has been a critical one on account of the financial crisis, and the Registrar has consequently devoted most of his energies to the strengthening and consolidating of the existing societies rather than to expansion. As a result, the number of new societies was less than in either of the two preceding years, but the number of members increased by 27,000 and now stands at 161,000, and the total working capital for the 3,333 societies stands at 184½ lakhs, which is 76 lakhs greater than last year.

The working capital of the Central Societies has increased by about 16 lakhs, of which amount the central banks contribute some 11 lakhs. Practically all the central banks are doing well and, on the whole, repayments of loans by societies are satisfactory.

The drop in the amount of deposits and increased withdrawals are the most marked features of the working of the agricultural societies, but it is satisfactory to learn that the panic which led to the closure of many Indian banks, and even to a serious run on the Post Office Savings Bank, had comparatively slight effect on these rural societies.

There are now 3,261 village societies spread over 25 districts; in each society the average number of members is 47, and there is an average sum of Rs. 85 available for loans to each member as against Rs. 75 in the previous year. A new rule has now been passed for defaulters under which the Registrar has power to decide disputes himself, or by appointment of an umpire, in cases where a man refuses to pay; the decision is treated as the decree of a Civil Court.

There can be no doubt as to the improvement effected in agricultural credit by means of agricultural societies, and it has been noticed that there has already been a substantial decline in the rate of interest demanded by money-lenders from agriculturists even in villages where societies do not actually exist. Among their miscellaneous activities it may be mentioned that these societies are becoming awakened to the necessity of more school education for their children; they also continue to exercise a powerful check against extravagant expenditure on marriage ceremonies and the like. Their action in the matter of reduction of litigation and in the propagation of scientific agriculture has already been noticed, and in many other ways they conduce to the advantage of the members. It is estimated that the amount of indebtedness already cleared off by means of co-operative societies exceeds one crore; and there are indications that the money-lending classes are beginning not only to realise the futility of opposing the movement, but also to invest a part of their capital in it.

Harvests of the year.

21. The total sown area was 1 per cent. less than in the previous year and 3 per cent. less than the estimated normal, but, owing to more favourable conditions, the total matured area was 1 per cent. better than in 1912-13, and only 2 per cent. below the estimated normal.

Prices.

22. Prices, on the whole, were high, but those of cotton and sugarcane fell considerably as compared with the rates in 1912-13.

Forests.

23. The total reduction in forest area during the quinquennium from 1909—1914 amounts to 700 square miles, of which 635 were unclassed forests. The decrease—which represents 8 per cent. of the total forest area—is due mainly to colonization operations and also to the striking-off of an area of 244 square miles of guzara forests in the Rawalpindi Division. During the present year disforestation in the Multan and Montgomery Districts for colonization purposes has caused a further reduction of the area under the control of the Forest Department by 401·73 square miles. This reduction will to some extent be counterbalanced by the formation of irrigated plantations in the colony area for the supply, primarily, of fuel.

The question of the preservation of the forests in Kangra has been occupying the earnest attention of Government. The grazing tax, recently sanctioned under the Land Revenue Act, has been represented as uneven in its distribution and as pressing unfairly on the owners of buffaloes, and the rates are accordingly being revised. The tax has, as might be expected, aroused a great deal of local opposition, and numerous petitions have been received for its abolition. Government has no desire to increase its revenue by this tax, its object being the conservation, in the interests of future generations, of the forests which are threatened with extinction by the over-exploitation of the present generation. It is essential that something should be done to preserve the forests from the evils of excessive grazing and browsing, and hitherto no method has suggested itself except to tax the flocks and herds and so induce the owners to reduce the numbers.

There has been a marked increase in the total number of forest offences, which have risen from 9,956 in 1908-09 to 11,591 in 1913-14. The increase has occurred under unauthorised fellings and illicit grazing, mainly in the Rawalpindi and Kangra Divisions, and is partly due to greater vigilance and activity on the part of the establishment. By far the larger number of these cases are compounded, only 908 new cases having been taken into court during the year.

The results of the sylvicultural operations were unsatisfactory; the year, owing to the early cessation of the monsoon, was an unfavourable one for generation generally, and reproduction, both natural and artificial, suffered in consequence.

In order to cope with the destructive effect of the Chos in the Siwaliks, large reboisement operations are being undertaken in that area and a Forest Officer, with a special establishment, has been deputed for their supervision. The results achieved by the measures taken within the last ten years to arrest further denudation and restore the land damaged by the Chos have been most encouraging. The department continues to show great activity in carrying out sylvicultural experiments, but few definite results have been obtained at present. Among the most important of these are the departmental firing experiments which have met with considerable success and are being extended. Favourable reports have been received on the eucalyptus sowings in the Simla Hills.

During the quinquennium there has been a slight increase in the amount of timber extracted from the forests, whilst the extractions for fire-wood have fallen considerably, the decrease being due to the large reduction of the area under unclassed forests on account of colonization.

The financial working of the forests during the quinquennium has been satisfactory. The revenue has risen from Rs. 9,75,486 to Rs. 13,57,527, and the surplus now amounts to Rs. 4,31,779 as compared with Rs. 2,97,153 in 1908-09.

Trade and Manufactures.

Industries.

24. The output of coal was 51,000 tons as compared with over 38,000 last year. The output from the salt mines also increased by nearly 4 per cent. and amounted to about 39 lakhs of maunds.

The number of factories rose slightly. During the year a whole-time Inspector of Factories took up his duties, and District Magistrates, though remaining *ex-officio* Inspectors, will not now be required to make periodical inspections, while Civil Surgeons will in most districts be responsible only for the certification of children in the factories of their districts. It is hoped, as the result of the expert supervision of the new Inspector, that a considerable improvement will soon be effected in the working of the Punjab factories, which have hitherto been inclined to disregard many of the provisions of the Indian Factories Act.

Internal Trade.

25. The total imports from other Provinces by rail and by river into the Province amounted to over 601½ lakhs of maunds in weight and the approximate value was nearly 3,159 lakhs of rupees. The exports from the Province amounted to nearly 621 lakhs of maunds in weight and 3,411½ lakhs of rupees in value. These figures all show a decrease on the previous year, except the value of exports, which has increased by 209 lakhs.

The noteworthy features of the trade of the year are the bumper cotton crop, the banking crisis, the decline in the export of wheat, gram and barley to Europe, and the famine in the United Provinces, which led to largely increased exports of barley, gram, jowar, bajra and grass to those Provinces. The famine in the United Provinces helped to minimise what would otherwise have been a serious decline of grain exports from the Punjab.

The most notable increase in imports was in foreign piece-goods caused by large imports of European cotton piece-goods in 1913 into India, the subsequent fall in prices having led to increased exports into the Punjab. Other large increases were in marble, stone and metals owing to the requirements of Imperial Delhi and to the construction of bridges over the Sutlej, Beas and Ravi, and in cotton seed owing to the scarcity of fodder in the south-east dry area during the last four months of the year under review.

The decrease in imports of coal and coke was remarkable, and was due to a rise in prices, shortage of waggons and the closing of a number of factories owing to the bank failures. There were also large decreases in the import of sugar and of gunny bags, this last being due to the decrease of wheat exports.

External Trade.

26. The total imports from Central Asia registered at Leh during the year under report amounted to 14,000 maunds in weight and 11 lakhs of rupees in value, and the exports to 12,000 maunds in weight and 17 lakhs of rupees in value. Comparison with the figures of previous years is useless owing to a change in registration, the figures being now supplied by the Assistant Resident at Leh and including for the first time the trade *viâ* Kashmir, which passes by the Rawalpindi route. Trade with Ladakh, which is internal trade, is no longer included in the statements.

As compared with 1912-13 the total imports in 1913-14 from Afghanistan increased in weight by 5 per cent., but declined in value by 13 per cent; exports increased in weight by 39 per cent., but fell off in value by no less than 53 per cent. The export from Afghanistan of hides and raw wool is reported to have been prohibited by His Majesty the Amir for the benefit of factories recently established in his territories. The chief decreases in exports to Afghanistan were in European and Indian piece-goods, manufactured leather, raw sugar and iron. These goods are, however, said to be exported from the Punjab into Afghanistan *viâ* Quetta and Chaman, and this trade is not included in the Punjab returns. Exports of rice and green tea more than doubled, the increase in the former case being due to a good crop in the Punjab.

Imports from Chinese Tibet were 7 per cent. less in weight than in 1912-13, but increased in value by 16 per cent. The chief articles of import are wool, salt and borax, of which by far the most important is wool. Excluding treasure, exports, which, owing to transport difficulties, are insignificant, increased by 9 per cent. in weight, but declined in value by 35 per cent.

Joint Stock Companies.

27. The salient feature of the year under review is the financial crisis in the Punjab, 3 large banks having suspended payment and gone into liquidation, and in consequence several other companies having failed. The strain was felt over the whole of the Province, and many companies, which did not actually collapse, had to restrict their operations very considerably. Of the new companies registered in 1913-14, 11 were banks and 7 trading companies, but 10 of these were unable to weather the financial storm. The number of registered companies shown as working on March 31st, 1914, was 146 as against 155 in 1913. Twenty-two new companies were registered and 31 reported as having ceased working, though 38 more companies actually came to an end, these last not being included in this year's statistics for one or other technical reason. Of the companies which failed, 21 were banks.

Public Works.

28. The prosperous state of the Provincial finances during the past year is clearly reflected in the report on the working of the Public Works Department, which is the chief spending department of the administration. The Punjab is now after many years in a position to meet the pressing demand for more and better Government buildings, and

for improvement in communications incidental to a rapidly progressing Province. The expenditure in the Buildings and Roads Branch of the department amounted during the year 1913-14 to Rs. 91,60,282, the highest figure yet attained. In the two previous years the expenditure stood at Rs. 70,21,581 in 1911-12 and Rs. 79,70,169 in 1912-13. Most of the increase has been under the head of Civil Buildings, but there have also been increases under all heads of Provincial works. At the same time the establishment charges have remained practically constant for the last eight years. The result has been that the proportion of the cost of establishment to that of works has been reduced from 30·95 in 1909-10 to 13·27 in 1913-14. Many buildings have been erected for the Police and Educational Departments during the year, and a considerable advance has been made in improving the main line of road communications in the Province, which last is partly due to the stimulus provided by the increased motor traffic. A new bridge is in course of construction over the Ravi at Lahore, and the old railway bridges over the Beas and Sutlej have been converted into road bridges.

The chief imperial work completed during the year was the Imperial Legislative Council Chamber at Simla which forms an extended wing of Viceregal Lodge and has cost more than 4 lakhs of rupees.

Among the Provincial works completed during the year may be mentioned the Simla hydro-electric scheme, which serves the dual purpose of supplying light and energy to Simla and also of supplying energy to pump water in order to augment the present supply. The Dane Dam at Nammal in the Mianwali District is the first large masonry dam constructed by the Punjab Public Works Department and is a new feature in irrigation; it has been built on a rocky gorge of a stream and will irrigate an area of about 18,000 acres. Another interesting work now under construction is the grain elevator at Lyallpur, which is the first attempt made at handling and storing grain by modern methods on a large scale in the Punjab.

IRRIGATION.

29. The direct receipts and expenditure of the Irrigation Department during the year were Rs. 2,56,62,835 and Rs. 1,96,78,459 respectively as against Rs. 2,28,97,431 and Rs. 2,29,78,853, the average of the previous triennium. The expenditure was practically divided evenly between Capital and Working expenses. On the canals in operation classed as Productive Major Works, the profit on the year's working after deducting interest charges was 205 lakhs as compared with 187 lakhs in 1912-13, and the percentage of this to the capital outlay is 12·22 as compared with 11·48. The total area irrigated by these canals was 7,351,721 acres, which is greater than in the previous year. The Upper Chenab and Lower Bari Doab Canals were the only two which ran at a loss. The former of these cannot be worked to full advantage until the completion of the Upper Jhelum Canal, but the area irrigated since the canal opened in 1912 is well in excess of the forecast. The latter was only opened during the year and could not be expected to run at a profit.

The opening of the Upper Jhelum Canal has been postponed owing to extensive flooding caused by the river bund breaching, but otherwise satisfactory progress has been made and the excavation of the main line has been completed.

Railways.

30. On the North-Western Railway the open mileage is now 5,178 miles and 273 miles are under construction or sanctioned for construction. The total capital outlay up to 1913-14 amounts to 9,06,563 thousands of rupees, and the net earnings were approximately 4¼ crores, the percentage of net earnings on total capital outlay being 4·68; on the Commercial Section of the line the above percentage was 5·88 and on the Military Section was 0·02.

During the year the Jullundur-Hoshiarpur Branch was opened throughout its length. It traverses a rich part of the Punjab and should pay well.

Revenue and Expenditure.

31. The revenue raised in the Province amounted to Rs. 8,71,14,000 which is somewhat less than in the previous year, this being due to large sums under the head of Sales of Government estates and waste lands having been included in the land revenue figures for the financial year 1912-13 on account of sales of land in the canal colonies. The only other important variation in income is a large increase of 20½ lakhs from irrigation. General.

The total expenditure for the year was Rs. 5,87,60,000 or about 37 lakhs greater than in 1912-13, the main causes of which have been increased expenditure on "Education" and "Civil Works" by over 10 and 30 lakhs respectively, the latter figure being increased, however, partly owing to grants for sanitary works made to local bodies having been debited to it instead of to "Medical," the expenditure under which head shows a corresponding decrease of about 12 lakhs.

32. The principal event in the excise administration of the year has been the passing of the new Punjab Excise Act which came into effect on the 1st February 1914. This Act will greatly strengthen the hands of the excise authorities, especially by means of the enhanced penalties which it provides for various offences. The effect of the Act could hardly be apparent in the year under review; but the more stringent provisions of the new law should lead to a material reduction in drunkenness and in illicit distillation. After making allowances for the exclusion of the Delhi figures, etc., the real increase of revenue in the year under review may be taken at about Rs. 4,91,000. This increase has occurred mainly in the receipts from country spirits both in still-head duty and in vend fees and from sales of excise opium, this last being the result of the rise of issue price from Rs. 18 to Rs. 20 per seer from the 1st April 1913. Excise.

The policy of reducing the number of retail licenses for the sale of country spirits has been steadily pursued, and the total of such licenses

fell from 783 to 766 during the year. It appears, however, that a point has now been reached where a further decrease of shops merely sends the trade to the remaining shops or to the illicit still. This view is borne out by the fact that the present reduction of shops has been accompanied by an increased consumption of about 13,000 gallons of country spirit, though the amount of this spirit consumed in the Province is not excessive as compared with the rest of India.

The total consumption of opium is practically stationary, that of charas has decreased, that of bhang is, if anything, on the increase and it is feared that the cocaine habit is advancing in some parts of the province. An illicit trade in cocaine is known to exist, but the small bulk of the drug and the absence of any characteristic odour render detection specially difficult.

Income-tax.

33. The net collections of income-tax rose from Rs. 15,78,000 to Rs. 17,00,000 in the year under report. All heads contributed to the increase, but it was most marked in the case of the receipts under Part IV, where the enhancement was in some part due to the appointment of special officers to revise the assessment in some of the larger towns. The work in these towns is often of too intricate a nature to be performed satisfactorily by the local staff.

One of the obstacles which confront the income tax officer was removed during the year by the issue of instructions to the North-Western Railway to disclose the amounts paid to their contractors. But the difficulties in the way of accurate assessment are still great, and the proportion of cases in which assessees objected successfully to the demands originally made on them rose from 12 per cent. to 13 per cent. Objections were lodged by over one-third of the assessees.

Vital Statistics.

Public health.

34. The year 1913 was a healthy one, the birth rate being 45·4 *per mille* which is the highest since 1900 and the death rate 30·2 *per mille* which is only slightly in excess of the exceptionally healthy year which preceded it. Infant mortality continues very high, 23 of every 100 children born dying before they are one year old. This is due partly to midwives being unacquainted with simple principles of hygiene and partly to the ignorance of the mothers; efforts are being made to ensure the training of the former, but in the latter case development must come from within rather than from without and so must await the enlightenment of the public generally and the education of the mothers themselves.

The general death rate in towns calculated over many years shows a small relative improvement as compared with that in the country; this tends to show that sanitary improvements in urban areas are beginning to have an appreciable effect.

During the year there were severe epidemics of cholera and small-pox. The former disease was reported from 24 districts, but was very localized in intensity and, notwithstanding a considerable amount of apathy on the part of the people, particularly in towns, the epidemic

was kept in check and only spread to 590 villages and 46 towns out of a total of over 33,000 villages and 128 towns. Much harm was done through failure to give timely information in many cases; whereas, on the other hand, the adoption of simple and speedy measures in some villages averted an outbreak. The small-pox epidemic was a legacy from 1912 and the number of deaths was 38,687, a larger figure than has occurred since 1896. Though the death rate from this cause to some extent varied inversely with the extent of vaccination, yet neither the municipal authorities nor the people are fully alive to the advantages of vaccination and year by year lives are lost through this failure to appreciate a palpable fact.

Plague, which has been such a scourge in recent years, also appeared in 1913, but the visitation was comparatively mild, the number of deaths in British districts being only 17,904 as compared with an annual average mortality of 180,000 since 1904. Thirty-nine medical officers continued to be employed on plague duty, their services being also utilised for giving general medical aid, which policy is not only of intrinsic advantage, but also brings them into touch with the people.

The striking and appalling visitations of plague bring it into high relief before the public eye, but the steady ravages of malarial fever, not only in the number of lives claimed, but also in the number of lives spoiled, are held by experts to be even more serious. This disease affects all races and every social grade; it is one of the chief causes of infant mortality, and its influence on the birth rate is only less marked than on the death rate. These facts afford more than ample justification for the temporary creation of the Punjab Malaria Bureau whose first annual report has been issued this year. The actual deaths from fever in 1913 were 331,698, which is greater than in either of the two previous years, but the average annual mortality since the epidemic of 1908 has been less than in any quinquennium in the last 30 years—a fact which is of interest in view of the common impression that canal irrigation has increased this disease.

This year statistics have been submitted from the leper asylums which are practically all managed by missionary societies. These institutions do invaluable work not only for their patients but also, owing to the consequent segregation of lepers, in diminishing the prevalence of this loathsome disease. The number of lepers in the Province at the time of the 1881 census was 9,390, but it has steadily decreased and in 1911 was only 3,091. If present conditions continue, there should be very few lepers in the Punjab in 30 years time.

Sanitation.

35. The new life which is being infused into municipalities by generous grants from Government is shown by increased activity in promoting sanitary works which can almost be said to be increasing in geometrical progression, but this activity is apt to exhaust itself in the construction of works and tends to diminish decidedly in matters of administration. The Government resolution already referred to in regard to the employment of Health Officers or properly qualified Sanitary Inspectors should provide a stimulus in this respect.

Rural sanitation has begun to attract more public attention, but the non-success of the system of rewards for cleanliness in villages shows how little interest is taken so far by the rural population in this subject and legislation and administration cannot proceed too far in advance of the times. The Punjab Sanitary Conference, which met in August 1913, made valuable recommendations, many of which dealt with rural sanitation. As an educative measure it has been proposed to select some prominent villages, where there is much traffic, to improve their sanitation and thus to give practical demonstrations to all who pass of the advantages accruing from cleanliness.

The demands on the Sanitary Department have increased and a second Deputy Sanitary Commissioner has been appointed. A six months' course of training, including much practical work, has been arranged to meet the coming demand for qualified Sanitary Inspectors.

Medical Relief.

Hospitals.

36. Few departments of Government are appreciated as much as that for medical relief, especially by surgery. This year 19 dispensaries have been opened and 7 closed, leaving a total of 466, and, in addition, 28 canal dispensaries are now open to the public. This gives an average of about 18 dispensaries to each district, and in some tracts, where it has not yet been found feasible to build dispensaries, there are itinerant Sub-Assistant Surgeons, and the staff on plague duty also do general medical work wherever they may be, having treated 84,500 patients in the year. Supreme testimony to the surgical work of the medical staff is afforded by the figures of cataract operations which in the triennium ending 1910 amounted to 29,332, and in the triennium now ended number about 41,900; but practically all forms of operations show an increase. The number of patients for medical treatment has also increased.

Contributions from Government towards medical institutions have increased annually and those from district boards also show a steady improvement, though the normal income from subscriptions is still very meagre.

The ever-increasing demand for trained female medical practitioners, nurses and compounders is receiving attention and the Northern India School of Medicine has been recognized as the Provincial medical school for women.

Education.

General.

37. In a progressive country where the percentage of school attendance to the estimated total population of school-going age, though steadily improving, still stands at only 22·79 for boys and 4·76 for girls, it follows that each year an advance in the number of educational institutions and in the number of pupils has to be recorded. This year the rate of progress has been well maintained, the number of educational institutions having increased by more than 600 and attendance by nearly 4,000, while expenditure rose by 9 lakhs to 93 lakhs, of which more than 50 lakhs were contributed by Government. Attendance is nearly double now what it was ten years ago, and the annual expenditure is 138 per cent. greater. That this activity, though greatly stimulated by generous Government help, is also shared by the people of the Province,

is shown, for instance, by the fact that 7 new high schools were opened by denominational bodies during the year, while in primary education district boards found it possible to raise their grants-in-aid to privately managed schools from 64½ to 89½ thousand rupees, whereas ten years ago the sum thus expended was only 28½ thousand. All communities have begun to open elementary schools, and local bodies are rarely slow to subsidize them, though municipalities have not shown so much energy in this respect as district boards.

Primary Education.

38. The figures showing the large increase are given in the body of the report. The great expansion has not caused any loss of efficiency, the proportion of trained to untrained teachers having risen and the ratio of pupils to teachers stands at 32·1 as compared with 36·1 in the last quinquennium. The growing interest of agriculturists in primary education is evinced, not only by the many instances, particularly in the colonies, in which they have come forward with offers of contributions and buildings for new schools, but also in the satisfactory addition to the number of agriculturists' children at school. To encourage this tendency and at the same time to meet the criticism that education spoils a ploughman, a new curriculum for primary schools has been issued. Its distinctive features are a combination of literary training with practical instruction in certain subjects, and endeavours are being made to shorten hours so as to give boys time to help their parents in the fields.

Secondary Schools.

39. The increase in the secondary schools has been very marked, 36 having been added during the year. The activity shown by the Sikh community in this respect has been noticeable in recent years and a similar movement by Muhammadans is now on foot. This rapid increase is not free from danger unless means can be adopted to ensure that the education imparted in them is thorough and useful. The reality of these dangers has been brought home by the unsatisfactory tendencies in the matter of conduct and discipline which manifested themselves in some institutions.

Collegiate Education.

40. The number of Arts Colleges affiliated to the Punjab University has increased from 9 to 10 through a college class having been opened in the Kinnaird High School for Girls in Lahore. During the year a course of lectures was delivered by University lecturers from England, and this proved a most successful innovation and is being repeated. The year, as a whole, was normal except for the unfortunate incident of a strike at the Medical College, the measures taken in regard to which have already been published.

Technical Education.

41. Among professional and technical institutions the most noticeable features are the great demand for admission into the Veterinary College and the difficulty experienced in inducing recruits to join the Agricultural College at Lyallpur. The number of industrial schools in the Province increased from 18 with 1,767 pupils to 24 with 2,249 pupils and some ordinary schools have industrial classes attached.

Education of Special Classes.

42. The increase of pupils in girls' schools as compared with last year is over 14 per cent. and the demand for higher education is growing, there having been six students at the new collegiate classes of the Kinnaird

High School, 21 having appeared in the Matriculation Examination and 214 as against 162 in the Middle School Examination. The great need being for good teachers, it is pleasant to note that the number of students in the Normal School for Women at Lahore rose from 35 to 64.

Great keenness is being shown by the Muhammadan community in the cause of education, and Government is encouraging their efforts to come abreast of the sister communities, especially in regard to higher education. In pursuance of this policy the Government of India have recently sanctioned a recurring grant of Rs. 30,000 for the Islamia College, Lahore. In primary education the Muhammadan community holds its own; development in secondary and collegiate education is far slower, but the enthusiasm now displayed, supported by substantial help from Government, cannot fail to yield excellent results.

Literature and the Press.

43. No book of very striking merit was published during the year. One of the notable features of the output is the absence of political and especially of seditious literature which has become almost extinct in the Punjab as a result of the Press Act; philosophy also seems to be in disfavour.

The newspapers and periodicals had plenty of exciting topics to discuss in the Balkan wars, the South African immigration question, relations between Hindus and Muhammadans, etc., but, though comments were frequently strong, action under the Press Act had seldom to be taken. In the majority of presses security was not demanded and, when demanded, ranged from Rs. 500 to Rs. 2,000. In the case of three presses only was the security deposited on declaration declared forfeited, and demands for security resulted in the closing down of two existing presses and prevented the opening of eleven new ones. Warnings were administered to the publishers of eight newspapers in connection with articles calculated to excite disaffection or to engender feelings of class hatred.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Survey and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

Personnel.

1. Sir Louis Dane, G.C.I.E., C.S.I., D.O.L., held charge of the office of Lieutenant-Governor of the Punjab till the 26th May 1913, when he retired from the service and was succeeded by Sir Michael O'Dwyer, K.C.S.I.

General.

2. The scheme for the reorganisation of the higher branch of the judiciary of the Province was sanctioned during the year. Legal effect was given to the changes involved by the passing of the Punjab Courts Act, III of 1914, and the new arrangements of the superior courts came into force from the 1st August 1914. By these changes the court of the District Judge as hitherto known to the Province disappeared, and the position of District and Sessions Judges was assimilated to that occupied by these Judges in the older "Regulation" Provinces. The superior judicial posts in the Punjab now comprise 22 District and Sessions Judges, and one Judge of the Small Cause Court at Simla. Of these 23 posts six are "listed" as open to members of the Provincial Civil Service.

Simultaneously with the new grading of the District and Sessions Judges was introduced a re-grading of the superior Executive Branch of the service. The number of Deputy Commissioners was increased from 33 to 42 by the inclusion in the regular cadre of nine special posts (six Settlement Officers, the two Secretaries to the Financial Commissioners, and the Registrar, Co-operative Credit Societies), which had hitherto been held by "seconded" officers. Of these executive posts five are "listed". A great improvement in the grading of Deputy Commissioners, by placing 14 in each grade, was at the same time introduced.

A temporary appointment of Assistant to the Registrar, Joint Stock Companies and Co-operative Credit Societies, to cope with the growing amount of work dealt with by the Registrar was created at the end of the year.

PHYSICAL AND POLITICAL GEOGRAPHY.

8.—Relations with Tributary States and Frontier Affairs.

3. The most important facts in the political administration of the year were the withdrawal of Bahawalpur State from the control of the Political Agent to the Phulkian States, and the constitution of a new Political Agency for the Baháwalpur, Máler Kotla and Faridkot States.

Lieutenant-Colonel B. E. M. Gurdon, C.I.E., D.S.O., of the Foreign and Political Department, whose services were lent to the Punjab Government by the Government of India, was appointed to the Phulkian States Agency on the 22nd November 1913. Major A. C. Elliott on the same date assumed charge of the Baháwalpur Agency.

The following brief notes are inserted concerning special events of importance in the history of the States during the year :—

I.—PHULKIAN STATES.

PATIALA.

Area, 5,412 square miles; population, 1,407,659; approximate revenue, Rs. 90 lakhs; army and police, 5,310; Chief, Sir Bhupendra Singh, G.C.I.E., Sidhu Jat, aged 23; has a male heir; title, Maharaja; salute, 17 guns.

Personal.

4. His Highness the Maharaja enjoyed excellent health throughout the year. Sir Michael and Lady O'Dwyer paid a short private visit to Chail in September. His Highness attended at Lahore on the occasion of the Lieutenant-Governor's State entry in November and formal visits were exchanged. In February 1914 His Honour paid a State visit to Pátiala. In April, and again in November, the Maharaja was out in camp conducting manœuvres of his troops in which he personally took a prominent part. In May 1913 a Darbar was held at Patiála at which the Political Agent presented jewels on behalf of the Punjab Government in connection with the birth of the Tikka Sahib.

Administration.

5. The form of the administration of the State was changed materially towards the end of July when the Prime Minister and Home Minister retired and the administration was taken over by six Secretaries acting under the direct supervision of the Maharaja.

Public health.

6. The Hardinge Hospital at Dharmpur for the treatment of tuberculosis was opened by His Excellency the Viceroy in September 1913. The birth rate in the State was 38·7 and the death rate 25·15 *per mille*. There was no abnormal amount of disease.

Military.

7. The Imperial Service Troops in which His Highness takes a keen personal interest maintained a high level of efficiency. The Rajendra Lancers attended the manœuvres of the Ambala Cavalry Brigade and earned the commendation of the General Officer Commanding.

JIND.

Area, 1,259 square miles; population, 271,728; approximate revenue, Rs. 22 lakhs; army and police, 1,731; Chief, Sir Ranbir Singh, K.C.S.I., Sidhu Jat; aged 35; has no male heir; title, Maharaja; salute, 11 guns.

Personal.

8. His Highness the Maharaja paid a visit to the Lieutenant-Governor at Lahore in November 1913, and His Honour visited the State in February 1914. During this visit the Lieutenant-Governor laid the foundation stone of the King-Emperor George Coronation Wing of the Golden Jubilee Hospital at Sangrur.

Agriculture.

9. Damage was caused in several villages of the Sangrur and Dádri Districts by swarms of locusts. Spraying with sanitary fluid on water was tried without success, but trapping in trenches and burning proved efficacious.

Public Works.

10. The construction of the Jind-Pánipat Railway was commenced during the year. Proposals in connection with the passage of the projected Bikáner-Delhi Railway through the State are receiving the attention of the Darbar. The survey of certain parts of the Dádri Ilaqa with

a view to ascertaining the feasibility of canal irrigation was taken in hand.

11. The Imperial Service Infantry Regiment fully maintained its high reputation. S. Baldev Singh, son of the Chief Minister, was appointed Commandant. Military.

12. Twenty-seven Co-operative Societies were started during the year, bringing the number up to 49. The capital of these societies has risen from 47 to 82 thousand rupees. The movement appears to have had a successful start and has done much to increase the prosperity of the agriculturists. The Ranbir Mills, a new cotton-ginning factory, were opened at Sangrur. Miscellaneous.

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 17 lakhs; army and police, 1,523; Chief, Ripudaman Singh, Sidhu Jat; aged 31; has no male heir; title, Maharaja; salute, 11 guns.

13. The Maharaja spent most of the hot weather at Dehra Dun and Mussoorie on account of his health. In October 1913, His Highness paid a visit to the Lieutenant-Governor at Simla and again at Lahore in November when all the Punjab Chiefs assembled there. In February 1914 His Honour visited the State and exchanged visits with His Highness. Personal.

14. The administration of the State continued to follow traditional methods. Administration.

II.—STATES OF THE BAHAWALPUR AGENCY.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 42 lakhs; army and police, 1,900; Chief, Sadiq Muhammad Khan, Abbasi V, Daudputra; aged 9; title, Nawab; salute, 17 guns.

15. The young Nawab arrived in India from England in January to celebrate his birthday, and came to Bahawalpur to receive the Lieutenant-Governor, who was visiting the State. The Nawab subsequently returned to England for another eight or nine months under the charge of the late Political Agent Mr. C. H. Atkins, I.C.S. His Highness' general health and strength have much improved by the change of climate and surroundings. Personal.

16. An agitation was raised against the introduction of an income-tax, especially in Bahawalpur itself, by a section of the Hindu residents. An amicable settlement was however effected by the authorities, and the agitation subsided. The tax brought in a little over Rs. 50,000. Finance.

17. No new irrigation projects were undertaken in the State. The attention of the Darbar has been chiefly occupied by the Perennial Satlej Canal Scheme now under the consideration of Government. The Darbar have had the benefit of the advice of Sir John Benton, late Inspector-General of Irrigation, who came from England for the purpose. Existing canals worked normally, though, owing to the rivers being low, the supply was somewhat below the average. Irrigation.

18. The Camel Corps and the Cart and Baggage Corps are very efficient and earned the commendation of the Inspector-General, Imperial Service Troops. In March 1914 the Darbar offered a detachment from these troops for service in British East Africa, where there was at the time a possibility of active operations. The situation, however, improved and the detachment was not required, but His Majesty's Government expressed their high appreciation of the Darbar's action. Military.

19. In Police matters the relations with the surrounding British Districts and the Native States of Bikaner and Jaisalmer have been very satisfactory. Police Co-operation Rules have markedly helped to diminish border crime. Police.

PHYSICAL AND POLITICAL GEOGRAPHY.

MALER KOTLA.

Area, 167 square miles; population, 17,144; approximate revenue, Rs. 13 lakhs; army and police, 769; Chief, Muhammad Ahmad Ali, Khan Bahadur, Pathan; aged 33; has a male heir; title, Nawab; salute, 11 guns.

Personal. 20. During the summer months of 1913 His Highness visited Simla and Kasauli, and in February 1914 the Lieutenant-Governor visited the State. The Nawab was present at Lahore on the occasion of the Lieutenant-Governor's public arrival in November 1913.

Administration. 21. The settlement of the State was completed during the year by a lent officer, Khan Sahib Chaudri Muhammad Din, Extra Assistant Commissioner. The Land Revenue Assessment is now Rs. 4,40,773. The public health was good, but the year was not a very favourable one agriculturally. The Nawab takes considerable personal interest in the administration.

Military. 22. The Imperial Service Sappers are a very efficient corps, and impressed the Inspector-General favourably when he visited them.

FARIDKOT.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 10¾ lakhs; army and police, 381; Chief, Brij Inder Singh, Barar Jat; aged 17; title, Raja; salute, 11 guns; no male heir.

Personal. 23. His Highness the Raja is completing his last year's study at the Chiefs' College. He exchanged formal visits with the Lieutenant-Governor at Lahore in November 1913. His health, which at one time gave cause for anxiety, has greatly improved.

Administration. 24. The administration of the State remained during the year in the charge of the Council of Regency under the presidency of Sardar Dayal Singh. But these arrangements were completely changed soon after the end of the year under report.

Public works. 25. The water-works scheme is nearing completion, and in conjunction with it the Darbar is examining a scheme to light the station by electricity.

Military. 26. The Imperial Service Sappers are highly efficient and earned the commendation of the Inspector-General when he visited the State.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 31 lakhs; army and police, 1,357; Chief, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia Sikh; aged 41; has a male heir; title, Maharaja; salute 11 guns; tribute, Rs. 1,31,000.

Personal. 27. The State continued to be administered efficiently by His Highness the Maharaja with the able assistance of Mr. L. French, I.C.S. The Maharaja paid a visit to the Lieutenant-Governor at Lahore in November, and this visit was returned by His Honour in March.

General. 28. There is little to record, but many improvements were made during the year to a number of buildings in the State.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 4,30,000; army and police, 629; Chief, Jogendra Sen, Rajput Mandal; minor; title, Raja; salute, 11 guns; tribute Rs. 1,00,000.

Personal. 29. The young Raja is being educated in the preparatory school attached to the Queen Mary's College, Lahore.

Administration. 30. The State continued to be administered by Mr. A. L. Gordon Walker, I.C.S., as Superintendent and Settlement Officer, with the aid of an advisory council and under the supervision of the Political Agent Settlement work made satisfactory progress.

SUKET.

Area, 420 square miles; population 54,928; approximate revenue, Rs. 2,32,000; army and police, 71; Chief, Bhim Sen, Rajput; aged 29; has no male heir; title, Raja; salute, 11 guns; tribute, Rs. 11,000.

31. The year was devoid of any important events. His Highness the Raja came to Lahore in March to pay a ceremonial visit to the Lieutenant-Governor. General.

IV.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; approximate revenue, 6 lakhs; army and police, 605; Chief, Amar Prakash, Rajput; aged 25; has male heir; title, Raja; salute, 11 guns.

32. The Raja continued to administer the State efficiently and successfully. Personal.

33. There is nothing special to record except the progress made with the Nahan Water-Works which are now approaching completion. General.

KALSIA.

Area, 168 square miles; population, 55,909; approximate revenue, Rs. 2,42,250; army and police, 154; Chief, Ravi Sher Singh, Jat; age 11; title, Sardar; no male heir.

34. The Sardar attended the Aitchison College during the year and is making satisfactory progress. Personal.

35. The land revenue settlement operations were considerably advanced, one assessment report being submitted to Government. Several public buildings were improved. General.

PATAUDI.

Area, 53 square miles; population, 19,453; approximate revenue, Rs. 1,10,807; army and police, 65; Chief, Muhammad Ibrahim Ali Khan, Bahadur, Pathan; aged 26; has a male heir; title, Nawab.

36. The Nawab Muhammad Muzaffar Ali Khan, Chief of Pataudi, died on the 31st May 1913, and his only son succeeded him, Khan Bahadur Mir Nasar Ali being retained as Diwan. The installation ceremony of the young Nawab was performed by the Commissioner and the Political Agent at Pataudi on the 16th October 1913. Personal.

LOHARU.

Area, 222 square miles; population, 18,597; approximate revenue, Rs. 81,200; army and police, 63; Chief, Sir Amir-ud-din Ahmed Khan, Bahadur, K.C.I.E., Moghal; aged 55; has a male heir; title, Nawab; personal salute, 9 guns.

37. The title of Khan Bahadur was conferred by Government on Sahibzada Aziz-ud-din Ahmad Khan, brother of the Nawab and Nazim of the State. His financial administration of the State continued to be satisfactory.

DUJANA.

Area, 100 square miles; population, 25,485; approximate revenue, Rs. 77,107; army and police, 145; Chief, Muhammad Khurshaid Ali Khan, Bahadur, Pathan; aged 30; has a male heir; title, Nawab; tribute, 50 sowars, on requirement.

38. The Nawab administered the State himself. The Commissioner of Ambala visited the State in March 1914.

V.—LAHORE DIVISION.

CHAMBA STATE.

Area, 3,216 square miles; population, 135,873; approximate revenue, Rs. 3,89,000; army and police, 419; Chief, Sir Bhure Singh, K.C.S.I., C.I.E., Rajput; has male heir; age 45; title, Raja; salute, 11 guns.

39. His Highness attended the official entry of the Lieutenant-Governor to Lahore in November and formal visits were exchanged. Personal.

40. The administration of the State by the Raja continued to be very efficient. The various institutions were well maintained. Fruit culture engaged the attention of His Highness during the year. Administration.

PHYSICAL AND POLITICAL GEOGRAPHY.

Forests.

41. The arrangement by which the control of the State forests was restored to the Raja as an experiment for a period of five years came to an end on the 31st March 1913, but had been so successful that the Government of India sanctioned the permanent restoration of control to His Highness subject to the conditions laid down at the time of the experimental transfer in 1907-08.

VI.—SIMLA HILL STATES.

42. The chief particulars of the Simla Hill States are given in the following table:—

No.	State.	Area in square miles including feudatories.	Population in 1911.	Revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.	REMARKS.
				Rs.	Rs.							
1	Bilaspur ...	448	93,107	3,33,425	8,000	Bijai Chand, C.S.I....	Rajput ...	41	Raja ...	Yes	198	
2	Bashahr ...	3,820	88,957	1,44,442	3,945	Shamsher Singh ...	Do. ...	76	Do. ...	Yes (adopted)	13	
3	Nalagarh ...	258	49,230	1,57,460	5,000	Jogindar Singh ...	Do. ...	44	Do. ...	No	88	
4	Keonthal ...	116	25,354	1,00,971	...	Bijai Sen ...	Do. ...	37	Do. ...	Yes	36	Tributaries of Bashahr.
5	Baghal ...	124	26,006	68,976	3,600	Bikram Singh ...	Do. ...	21	Do. ...	Yes	25	
6	Baghat ...	36	8,797	50,000	132	Durga Singh ...	Do. ...	12	Rana ...	No	43	
7	Jubbal ...	288	23,727	1,98,063	2,520	Bhagat Chand ...	Do. ...	25	Do. ...	Yes	19	
8	Kumharsain...	90	12,219	30,000	2,000	Hira Singh ...	Do. ...	72	Do. ...	Yes	7	
9	Bhajji ...	96	14,972	33,504	1,440	Bir Pal ...	Do. ...	8	Do. ...	No	32	
10	Mailog ...	43	8,663	37,783	1,440	Durga Chand ...	Do. ...	16	Thakur ...	No	16	
11	Balsan ...	51	6,225	18,500	1,080	Bir Singh ...	Do. ...	50	Rana ...	No	...	
12	Dhami ...	26	4,484	30,000	720	Hira Singh, C.I.E. ...	Do. ...	37	Do. ...	Yes	25	
13	Kothar ...	20	4,016	17,000	1,000	Jagjit Singh ...	Do. ...	27	Do. ...	Yes	8	
14	Kunihar ...	80	2,208	6,000	180	Hardeo Singh ...	Do. ...	16	Thakur ...	No	9	
15	Mangal ...	12	1,267	1,000	72	Tilok Singh...	Do. ...	63	Rana ...	Yes	...	
16	Bija ...	4	1,064	8,496	124	Puran Chand ...	Do. ...	18	Thakur ...	o	8	
17	Darkuti ...	8	521	8,700	...	Ram Saran Singh ...	Do. ...	71	Rana ...	Yes	...	
18	Taroch ...	67	4,493	5,000	288	Surat Singh.... ...	Do. ...	27	Thakur ...	Yes	...	
19	Sangri ...	16	3,022	2,743	...	Hira Singh	Do. ...	63	Rai ...	Yes	...	
20	Kaneti ...	19	2,854	8,590	...	Amog Chand ...	Do. ...	23	Thakur ...	No	...	Tributaries of Keonthal.
21	Delath ...	42	1,392	2,743	...	Narindar Singh ...	Do. ...	64	Do. ...	Yes	...	
22	Koti, ...	50	8,265	44,154	...	Raghbir Chand ...	Do. ...	54	Rana ...	Yes	56	
23	Theog ...	144	6,345	14,391	...	Padam Chand ...	Do. ...	28	Thakur ...	Yes	8	
24	Madhan ...	9	3,901	5,500	...	Randhir Chand ...	Do. ...	27	Do. ...	No	6	
25	Ghond ...	28	1,887	5,610	...	Ranjit Singh ...	Do. ...	31	Do. ...	Yes	...	
26	Ratesh ...	12	472	700	...	Hira Singh ...	Do. ...	46	Do. ...	Yes	...	Tributaries of Jubbal.
27	Rawin ...	7	749	3,091	...	Kidar Singh ...	Do. ...	37	Do. ...	Yes	...	
28	Dhadi ...	25	244	1,600	...	Dharm Singh ...	Do. ...	26	Do. ...	Yes	...	

Bilaspur.—The administration proceeded smoothly.

Bashahr.—The new assessment of the Rohru Tahsil was announced and was well received.

Nalagarh.—Progress was made in the reduction of the State debt.

Baghat.—The general condition of the State is satisfactory. The young Raja is doing very well at the Aitchison College.

Jubbal.—The condition of the State continued to be most satisfactory.

Bhajji.—The Rana, Durga Singh, died on the 8th May 1913, leaving an heir of seven years of age who has been recognised as Rana. The administration is in the hands of a Council of four members.

Kumharsain.—The Tikka Sahib continued to do well.

Mailog.—The Thakur and his brother are students at the Aitchison College and received excellent reports from the Principal.

Kunihar.—The Tikka has been recently married to the sister of the Thakur of Taroch.

Taroch.—The forest management is now satisfactory.

Frontier Affairs.

43. During 1913-14 the Baloch border of Dera Ghazi Khan gave no trouble. Nawab Sir Bahram Khan continued to manage his tribe in an efficient manner and to give valuable assistance to the Administration as an Honorary Magistrate and as the principal member of the District Jirga of Chiefs and of the joint Dera Ghazi Khan-Baluchistan Jirga. On account of the age and infirmity of the Bozdar and Kasrani Tumandars arrangements were made to entrust the practical working of their tribes to Sardar Paind Khan, Bozdar, and Sardar Mahmud Khan, Kasrani. Sardar Jamal Khan, Leghari, remained in tutelage, but exercised powers as a magistrate and was initiated into the working of his tuman. The joint jirga met at Fort Munro in October. The date was fixed to suit the convenience of the Baluchistan authorities who were represented by Mr. Dobbs, Political Agent, Sibi. Satisfactory progress was made with business which included one noticeable case, *viz.*, that of a dacoity at Mamuri, of which the perpetrators were recovered from the Bugti Tuman through the friendly offices of Sardar Ghaus Bakhsh Khan, Mazari, and the Bugti Chief. The number of cases for disposal by jirga in the district, both civil and criminal, increased. Murders, however, amounted to 32 only and only one case was particularly remarkable, *viz.*, one in which two Pathan cattle dealers with two guides lost their lives ; this case was untraced. There were two serious cases of dacoity,—one took place at Mithewali on the 8th February 1914 and the other at Mangrotha on February the 20th, 1914. There is believed to have been no connection between the gangs which committed these two raids. The property lost at Mithewali, where two Hindus were killed, was not considerable ; the offenders were not traced and the Muhammadan landholders of the village were fined for failure to render assistance against them. The second raid was committed by six Mahsuds assisted by a Kasrani accomplice. The Biluch levy with the Kasrani and Khetrani tribesmen as well as the Usteranas turned out and attacked the raiders on their retreat. Five were killed and the sixth has been sentenced to 14 years' rigorous imprisonment. Liberal rewards were given for services rendered in connection with this raid and at the same time the sections of the Kasrani tribe which were believed to have assisted the raiders were punished.

PHYSICAL AND POLITICAL GEOGRAPHY.

9.—Condition of the people.

[For information regarding this section *vide*—

Administration Report for the year 1911-12, paragraph 249.
Moral and Material Progress Report for the years 1901-02 to 1911-12 and chapter VI, below.]

44. The results of the first regular survey of wages were described in last year's report. During the present year, owing to two good harvests, the prosperity of the agricultural population has been maintained and probably enhanced except in the south-east where both harvests were very poor; even there, however, thanks to the three preceding harvests being good, distress has not been severe. Wages continued to rise nearly everywhere except in the south-east, and the agricultural labourer was thus able to obtain his full share of the prosperity enjoyed by his employer.

The provincial birth rate for the year was 45·4 *per mille* which is 3·1 in excess of the average for the previous five years. The death rate was slightly higher than in the preceding year which was exceptionally healthy. As regards the prices of the valuable revenue-paying crops, the year was not quite so favourable as its predecessor, but, on the whole, prices remained high except in the case of unginned cotton and raw sugar.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue.— } Report on the Land Revenue Administration of the Punjab for the agricultural year 1st October 1912 to 30th September 1913.
Revenue Surveys and Settlements.— }

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1913.

Land Records.—Report on the Operations of the Department of Land Records, Punjab, for the year ending 30th September 1913.

Waste Lands and Government Estates.—
1. Annual Report for the Chenab, Jhelum and Chunián Colonies for the year ending 30th September 1913.
2. Land Revenue Report, *as above.*

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1913.

Revenue and rent-paying classes.—Land Revenue Report, *as above,*

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I—

Area Totals—Table 1 J.
Classification of Area—Table 2 I.
Incidence of Land Revenue—Table 5 I,
Transfers of Land—Table 6 H,
Changes in Boundaries—Appendix B,

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and collections.

45. The fixed land revenue demand is just under Rs. 2·13 crores. The exclusion of the Delhi Province meant a reduction of about 3½ lakhs. Of the total fixed demand, 97·3 per cent. was collected and the high standard of collection was well maintained in all parts of the Province, except in the three northern districts of Jhelum, Attock and Rawalpindi, where both crops were poor, and in Gujranwala, where the delay was caused by the re-assessment operations. The fact that over 95 per cent. was collected without any difficulty in all the remaining districts, many of which have recently been re-assessed, is a very clear indication that the resources of the zamindars of those tracts are fully capable of meeting the increased demands. It was found necessary to suspend a little over 4½ lakhs altogether, of which the three northern districts already mentioned account for nearly 3 lakhs. Of the outstanding balance of last year amounting to Rs. 7,85,597, Rs. 2,31,324 were recovered.

Riverain action.

46. The area removed from assessment owing to diluvion amounted to 28,056 acres compared with 29,648 acres last year. The area newly assessed was 44,291 acres. For the first time for several years provincial revenues have benefited from riverain action. The net increase in the fixed land revenue demand is Rs. 10,069.

FLUCTUATING LAND REVENUE.

Demand and collections.

47. Owing partly to recent re-assessments of the colony areas in Gujranwala, Lyallpur and Shahpur, in which the land revenue is almost entirely fluctuating, and partly to favourable river floods, there has been a further large increase in the amount of fluctuating land revenue which

ADMINISTRATION OF THE LAND.

has risen from 87 lakhs to nearly 110 lakhs. No less than 20 lakhs of the increase is due to the re-assessment or rather the first regular assessment of the colony lands. Of the remaining 3 lakhs, it is probable that the increase is partly due to more careful supervision. It is only in Montgomery that the amounts fell seriously short of the Settlement Officer's estimate which was admittedly a high one. In other districts, where fluctuating assessments are a prominent feature of the land revenue administration, such as Mianwali, Multan, and Muzaffargarh, there has been a satisfactory excess over the estimate. This excess is the result of favourable agricultural conditions, and when those conditions become unfavourable in these very precarious tracts, it must be expected that the realizations will be below the estimate. Only $\frac{1}{5}$ per cent. of the fluctuating demand was not collected, a fact which bears testimony to the leniency of the demand and the efficiency of the collecting agency.

Other land revenue.

Demand and collections.

48. Receipts under this head have fallen from 69 to 51 lakhs, which is due entirely to the contraction of receipts from sale of proprietary rights in the Lower Chenab and Chunián Colonies. Large sums may be expected from the auction sales on the Upper Chenab Canal and the Lower Bari Doab Canal in the future.

Miscellaneous.

49. There has been a continued decrease in the number of coercive processes issued, whether against lambardars or at their instance, and the cases in which it was found necessary to resort to sale of property or imprisonment were very few in number. The magnitude of operations may be gathered from the fact that though $3\frac{1}{4}$ crores of rupees were collected from some four million proprietary or occupancy holdings, in only 11 cases was resort made to imprisonment of the defaulter, and in 36 to sale of movable property, while in only two cases was it found necessary to sell immovable property. The lambardars continue to avail themselves freely of the permission to pay in land revenue by money-order, and over 18 lakhs was thus paid in, though the total amount so remitted was less than last year's total by $1\frac{1}{2}$ lakhs. On the other hand, the system of remitting the revenue in currency notes is still regarded with some distrust. It has been sanctioned experimentally in a few districts.

The system of requiring the sadr tahsil revenue accountant to attend at the sadr treasury when payments are heaviest, noticed last year as in force in Amritsar and Jhelum, has extended to Hoshiarpur, Multán and Dera Gházi Khan, and has proved a convenience. It is now the custom for Settlement Officers in reporting their proposals for the payments of the revenue demand to arrange, by fixing different dates for different villages, that only a manageable amount should fall due on each day of the period of payment. Not only is the work of accounts facilitated by this arrangement, but the Tahsildar and his Naib are also enabled to supervise the work of lambardars conveniently.

11.—Professional surveys.

Riverain party.

50. The riverain detachment of the Survey Department continued its work of traversing and laying down base lines during the year. Theodolite stations were fixed, circuits traversed and bases demarcated along the Sutlej, Ravi, Chenab and Jhelum rivers in connection with the Ferozepore, Lahore, Sialkot, Gujrat, and Shahpur Settlements, and plotted sheets were supplied to Settlement Officers. Twelve hundred square miles of circuit were traversed, and the expenditure amounted to Rs. 21,906.

Other work done.

51. The Lower Bari Doab rectangular survey was completed. Nearly 15,000 rectangles of 25 acres each were laid down and over a thousand linear miles were traversed. More than half the work was tested by Naib Tahsildars, Tahsildars and Survey Officers : 16 per cent. was

checked by theodolite traverse. The expenditure during the year amounted to Rs. 70,256. Operations extended over three seasons at a total cost of Rs. 3,18,278, against an estimated expenditure of Rs. 4,63,586. In all 2,883 square miles have been surveyed.

The services of the detachment were also obtained in providing an accurate framework for field measurements in the Khushab Thal and in compiling maps showing village boundaries. The traverse covered 1,967 linear and 1,070 square miles and 3,808 theodolite stations were laid out at a cost of Rs. 17,335.

In order to facilitate measurements in the Dera-Hamirpur Settlement and to gain experience for the future patwari surveys of the remaining tahsils of the Kangra District, an experimental survey was carried out in that district by the detachment on the basis of the previous triangulation by the Survey Department. Points in suitable places in cultivation and along "tika" and village boundaries were picked up and plotted, and mapping sheets for 256 "tikas" were supplied to the Settlement Officer. The experiment proved successful and will be extended to the other tahsils. The triangulation and the traverse of 637 linear and 81 square miles cost Rs. 5,712.

A topographical survey of 388 square miles in the Ludhiana District was made by the Survey Department. The only important alteration in district boundaries was the transfer of 140 villages from the Montgomery to the Lyallpur District.

12.—Revenue Surveys and Settlements.

52. Ten settlements were in progress during the year, by the end of which the Kulu and Gujranwala settlements were completed. In the former the cost was 25 per cent. below the estimate, but the Gujranwala settlement has been both more lengthy and more costly than was anticipated. Its cost, however, will be recovered in two years. In Shahpur and the Dera-Hamirpur-Una Tahsils also unforeseen difficulties have delayed progress, and the estimated cost and duration will probably be exceeded. A similar result may be expected in Gujrat and Lahore. Considerable progress was made with re-assessment during the year, and the new assessments were on the whole well received. An exception must perhaps be made in the case of the Rakh Branch of the Lower Chenab Canal where the large increases of revenue in a prosperous and highly developed tract, which was for the first time being assessed on regular lines, gave rise to some excitement. The Lieutenant-Governor, on personal enquiry, found that there were absolutely no grounds for the complaints of general over-assessment, but that in some cases it was advisable to graduate the enhancements, or to impose intermediate rates of assessment, and action has now been taken on these lines under the orders of the Commissioners of Lahore and Multan. That the enhancements were moderate is established by the fact that the value of land has shown no tendency to fall, and though the landlord's margin of profit may have in some cases been reduced by Re. 1 or even Re. $1\frac{1}{2}$ per acre, the rent is still from 3 to 6 times the enhanced land revenue. Cases have come to notice in which landlords have leased their squares for a term of years at a profit of Rs. 600 per square or Rs. 22 per acre, the lessee bearing all charges.

The estimate of increase by re-assessment on the Rakh Branch of the Lower Chenab Colony is 13 lakhs of rupees per annum, the profits having far exceeded those of any other settlement conducted in the Punjab. This is due to the cost being very small, as no measurements were in progress; and the Settlement Office Staff consisted of two Naib Tahsildars and a small office establishment. In Gujránwála an enhancement of two lakhs per annum is expected. In Amritsar the re-assessment has resulted in an enhancement of three lakhs and thirty-seven thousand.

The Settlement Officer, Lahore, took up his appointment in the beginning of the year, and operations in Jullundur and the remaining tahsils of Kángra commenced on 1st October 1913.

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13.—Land Records.

Patwaris.

53. There has been a reduction of 105 in the total number of patwaris and assistant patwaris, due chiefly to the loss of Delhi Province and also to a smaller extent to re-arrangement of establishment in districts recently settled. There is some hope that the proposal to re-arrange the duties of Revenue and Canal Patwaris in the Canal Colonies may ultimately result in a considerable reduction in the Revenue establishment. The new system was introduced experimentally in 50 villages of the Lyallpur District. It is not so far successful, but its defects appear not to be radical. The experiment is to be continued for a second year in the selected circles.

There has been a further increase in the number of patwaris who belong to agricultural tribes, and an improvement in their educational qualifications. The last decade has seen a progressive improvement in the educational qualifications of patwaris. In 1903-04 only 35 per cent. had passed the Middle School and the Entrance Examinations. The proportion rose every year till it reached 47 in 1911-12 and 1912-13.

Kanungos.

54. The scheme for amalgamating the district and settlement kanungo staff is reported to be working satisfactorily on the whole, though a few minor difficulties have been experienced. The question of investing field kanungos with the power of attesting undisputed mutations is still under consideration. At present powers have been conferred on kanungos employed in settlements only, as they are under very close supervision. Such selected field kanungos attested 16,000 undisputed mutations of inheritance, but the only district in which appreciable relief was afforded to Revenue Officers is Lyallpur where $\frac{1}{3}$rd of the total disposals were attested by field kanungos. It is under contemplation to extend the power of attestation to certain specified classes of undisputed mutations other than inheritance; and opinions have been called for as to what these classes should be.

Records.

55. The system of having maps corrected and records revised in districts about to come under settlement before the Settlement Officer enters upon his duties, has been the subject of careful consideration. The results of the experiments in the three districts where it has been tried have not been satisfactory, and the system has now been abandoned. One reason for this is that the system is partly based on the separation of record work from assessment, and thus the Settlement Officer tends to appear chiefly as a tax collector, and to lose that knowledge of local conditions and that influence with people which he gains from overhauling the records, checking the work of patwaris and kanungos, and generally showing that he is working in the interests of the people as much as in those of Government.

14.—Waste Lands and Government Estates.

Lower Chenab Colony.

56. Allotment in the Lower Chenab Colony is practically complete, except for the sale of small plots of unoccupied land. The total cultivated area shows a falling off this year by 74,400 acres. The decrease was in the *rabi*. The shortage of water at the time of the *rabi* sowings was due to the early cessation of the monsoon rains, but the decrease may be partly due to the abolition of *kharaba* and the discouragement of gambling on rain which in former years induced the cultivator to sow more crops than he could possibly mature by the aid of canal water, in the hope that they would be matured by rain. In those days the cultivator stood to lose nothing but his seed and labour, while he stood to gain a full crop. Now, however, he has to pay land revenue and canal dues, whether the crop matures or not. The fact that such a comprehensive change of system has been carried through without any expression of discontent is matter for congratulation.

Re-assessment.

57. The re-assessment of the Rakh Branch, which has already been noticed, caused some agitation on account of the large increase, but this excitement has now died down. Information has recently been received from an independent source to the effect that a large absentee landlord gets from his land only Re. 1-8-0 an acre less now than he got before the re-assessment was carried out.

Towns and markets.

58. The colony towns and markets have felt the effect of the recent financial crisis in the Punjab especially those in Lyallpur. The towns themselves are gradually becoming fully equipped with modern drainage systems, water-works and public buildings. There are, however, complaints of lack of funds and of want of room for expansion. A new private market in the Sharakpur Tahsil, called Warburton Market, has been started. This is the first instance of a town in the canal colonies entirely controlled by private management. The Nankána Market is another instance of private speculation, and it is said to be rising rapidly into importance.

Co-operation.

59. The spread of the co-operative movement in the colonies is satisfactory and the demand for education is a natural reflex of prosperity and new ambitions.

Service grants.

60. A special effort has been made during the year to impress on the service grantees that they must either fulfil their contracts or lose the consideration on which these are based. In consequence of the orders issued by the Financial Commissioner, the mule-breeding conditions have been enforced with greater strictness.

Lower Jhelum Colony.

61. The prosperity of the Jhelum Colony now seems assured; the Irrigation Department profit on capital outlay which in 1905—08 averaged 4 per cent., rose to 5 per cent. in 1908-11; and in the last year was 20 per cent. The re-assessment was carried out without any great protest and has been loyally accepted. The Co-operative Credit movement is making headway here as in Lyallpur and the success of the Zamindar Trading Company is noticeable; though the company is not registered, the registrar is guiding its activities which have already spread to Karáchi, and may go further still. This Company has four chief offices and 26 branches. Its profit on a year's working was 15 per cent. and it sold grain worth 87 lakhs. The Central Bank at Sargodha has also done well and has now provided a hundred village banks with loans amounting to Rs. 1,30,000.

Horse-breeding conditions.

62. The steady and encouraging progress made in horse-breeding operations from the beginning of the Colony till 1907-08 has not been maintained during the last six years. It appears that the colonists are somewhat lax in fulfilling these conditions, but as a result of a firm but sympathetic policy improvement is being effected.

Chunian Colony.

63. The colonists are generally prospering on account of good crops and the rise in prices. They are also fortunate in not being a prey so far to the evils of drink and litigation, which mar the prosperity of the Manjha Jats in Lahore District. The system of Co-operative Credit Banks is finding favour with the colonists, and in a short time there have been established 21 banks which are working well.

Lower Bari Doab Colony.

64. This colonization scheme had not been sanctioned by the end of the year, but preliminary work is being pushed on energetically and a considerable area has been given out on temporary cultivation. The time of the Colonization Officer has been mainly occupied with this work and the demarcation of the proprietary villages into squares and with the preparation of lists of local claimants to compensatory grants.

15.—Wards' estates.

65. During the year the Court of Wards had 50 estates under management; of these, three were released in a prosperous condition. As an illustration Arnauli estate in the Karnal District may be taken. It came under management in 1897. The small debt of Rs. 16,000 has been paid off; the landed property of the estate has increased from

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853 to 1,002 acres. Rupees 1,04,000 have been spent on permanent improvements. The value of the house property has risen from Rs. 34,000 to Rs. 85,000 and the total assets of the estate have swelled from Rs. 91,000 to Rs. 2,73,000. Various developments in the larger estates in the way of horse and cattle-breeding, fruit culture, grain markets, etc., are taking place and Kot Fateh Khan estate in the Attock District is prominent in this respect. Among other things this estate has started a Tenants' Co-operative Society, an experiment which is well worth imitation.

16.—Revenue and rent-paying classes.

General.

66. The decrease of 325 villages in the province is chiefly due to the exclusion of the Delhi enclave, but the consequent loss of cultivated area is almost counterbalanced by an extension of cultivation elsewhere. The total of land-owners and share-holders has fallen by three thousand, but jamabandi holdings are practically as before, which suggests that sub-division of holdings continues to increase.

Transfers.

67. Reports from all parts of the province show that the market value of land continues to rise steadily even in districts recently re-assessed. Several district officers notice the popularity of the Punjab Redemption of Mortgages Act (II of 1913). Very little opposition has been offered by money-lenders and the Act is reported to be working smoothly.

Loans Act.

68. There was a small diminution in the amount of advances under the Loans Acts which amounted to Rs. 7½ lakhs, as compared with rather more than 8 lakhs last year. There is a steadily increasing tendency among agriculturists to utilize advances from the Co-operative Credit Societies for the purposes to which taqavi loans are generally applied. This has been particularly noticed in Hoshiárpur and Gujránwála, where the demand for Government loans is consequently decreasing.

Land Alienation Act.

69. Members of notified agricultural tribes hold 86 per cent. of the cultivated area. The statistics show that the Act is having its intended effect of confining the interests of non-agricultural tribes in the land to temporary occupation, and the high prices prevailing during this and previous years have enabled the process of re-propriating the cultivating classes in land permanently alienated to go on at an increased rate. Nor is there any evidence that the Act is working only in the interests of large investors who are members of agricultural tribes, and the extent to which alienation is made to members of the same village community is a proof of the general benefit to the cultivating classes.

Rent paying classes.

70. The number of cases of ejectment of occupancy tenants has fallen from 108 to 34, but, on the other hand, the number of cases in which tenants-at-will were ejected, was 6,163 as against 4,404. It is difficult to account for this rise, but it would appear that the demand for tenants in the colonies has not had so far-reaching an effect as was supposed, and that the position of a tenant is not so secure as the ejectment figures of the last three years tended to indicate. In spite of plague and colonization throughout the greater portion of the province landlords are in a strong position, able to select their own tenants, and to choose between and realize in full the customary rates of rent.

Miscellaneous.

Descent of Jagirs Act.

71. No notifications under the Act were made during the year. The total number of jagirs gazetted remains at 139 with an annual value of nearly 8 lakhs of rupees, out of a total of about 30 lakhs assigned.

Land Preservation. Chos Act.

72. The policy of constructing expensive bunds to restrain chos in their lower reaches, has been abandoned, and work of this nature will be confined to maintaining and repairing a few of the less expensive and more effectual bunds in Hoshiárpur. With this will be combined reclamation operations by the planting of kharkhana grass in suitable localities, but in future the line of main action will be in the direction of reafforesting the western slopes of the Siwaliks.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1913.

(2) Report on the working of the Criminal Tribes Act for the year 1913.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1913.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1913.

Prisons.—Report on the Administration of the Jails in the Punjab, 1913.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1913.

Registration.—Note on the Registration Returns of the Punjab for the year 1913.

Legal Affairs of Government.—Report on the administration of the legal affairs of the Government of the Punjab for the year 1913.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1913-14.

Municipal Administration.—Report on the working of municipalities in the Punjab during the year 1913-14.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part VI.—Administrative and Judicial.

Part VIII.—Local Funds.

17.—Legislating Authority.

73. The following changes took place amongst the Hon'ble Members of the Council :—

1. The Hon'ble Mr. J. P. Thompson was nominated, *vice* the Hon'ble Mr. H. P. Tollinton, resigned.
2. The Hon'ble Colonel R. S. Maclagan was nominated, *vice* the Hon'ble Sir Henry Burt, resigned.
3. The Hon'ble Mr. H. J. Maynard was nominated, *vice* the Hon'ble Sir M. W. Fenton, resigned.
4. The Hon'ble Rai Bahadur Shadi Lal, elected Member for the Punjab University, vacated his seat on his appointment as Judge of the Chief Court, and the Hon'ble Sir P. C. Chatterjee was elected in his place.

18.—Course of Legislation.

74. Four meetings of the Legislative Council were held, three in Lahore and one at Simla. **Business transacted.**

Three Bills were introduced and passed in Council during the year.

On receiving the assent of His Excellency the Viceroy they became law as follows :—

(1) The Punjab Excise Act (I of 1914) ;

(2) The Punjab Fisheries Act (II of 1914) ; and

(3) The Punjab Courts Act (III of 1914).

Three hundred and nine questions were put and answered.

Two resolutions were moved, one dealing with rural sanitation and one asking for an increased allotment for sanitation. Both were withdrawn after discussion.

Indian Acts.

75. The Acts of the Imperial Legislative Council, more particularly affecting the province, passed during the year are :—

(1) The Code of Civil Procedure (Amendment) Act (I of 1914) ;

(2) The Destructive Insects and Pests Act (II of 1914) ;

(3) The Indian Copyright Act (III of 1914) ;

(4) The Decentralisation Act (IV of 1914) ;

(5) The Negotiable Instruments (Amendment) Act (V of 1914) ;

(6) The Provincial Small Cause Courts (Amendment) Act (VI of 1914) ;

(7) The Indian Telegraph (Amendment) Act (VII of 1914) ;

(8) The Indian Motor Vehicles Act (VIII of 1914);

(9) The Local Authorities Loans Act (IX of 1914);

(10) The Repealing and Amending Act (X of 1914) ; and

(11) The Indian Companies (Amendment) Act (XI of 1914).

19.—Police.

General Police Force.

General.

76. It is a matter of satisfaction that the deplorable increase of crime of recent years has at last apparently received a check for the first time since 1909 : excluding offences under local and special laws, and after allowing for the exclusion of the Delhi enclave, a decrease of 3 per cent. is recorded. The situation, however, is still serious. Various measures have been suggested, some of which may be adopted ; but the root of the matter is the securing of the co-operation of the people in the suppression and detection of crime. Unfortunately, considerable apathy still exists among the people with notable individual exceptions, but there are some hopeful signs that a more healthy state of public opinion is rising. In this connection an interesting movement was started in the Gurdáspur District where village committees or Panchayats have been formed to check petty crime, drunkenness and illicit distillation and generally to promote unity and harmony among the members of the village community. In several villages, where such committees have been formed, there has been a diminution in such offences, offenders being subjected to small fines or threats of ostracism or simply to the displeasure of public opinion. It is too early as yet to say whether the movement will last. Much is also done by sending petty complaints to local men of influence in the hope that they may effect compromises. As in the case of cycles of depression in trade, it is perhaps impossible to give any satisfactory explanation of periodical outbreaks of violent crime such as broke out in the Punjab in 1898-99, and again in recent years ; but much may be attributed to the growing intelligence of the criminal, to the decrease of awe of the Police, and to the measures taken by Government to eradicate

oriental methods of investigation. The investigator has thus fewer chances of success unless—and this is what the law assumes and expects—he receives the assistance of the community in the detection of crime.

77. The gravest feature in the figures of crime is a large increase in the number of murders, but the proportion of convictions has fortunately risen from 37 to 46 per cent., and if this improvement can be maintained it should foster respect for human life. If not, it may be necessary to take up again the question of amending the law so as to provide for effective confiscation of the murderer's property, which in the case of ancestral land, is at present impossible. Delays in the final disposal of murder cases are another source of help to the murderer. **Murders.**

78. There has been a slight decrease in the number of dacoities, but the number is still three times what it was in 1909. As a further measure of precaution, effect has been given to the suggestion made last year for the strengthening of the mounted police force throughout the Province, and in some of the most disturbed places new police stations and posts have been sanctioned, the cost of these being defrayed by punitive cesses. **Dacoities.**

79. The statistics show a decrease in burglaries, thefts and rioting. Special action was taken in the Karnál and Ambála Districts against cattle thefts. In Karnál an officer was placed on special duty; 103 persons were tried and convictions against a large percentage of the accused were obtained. These cases have had a satisfactory effect in checking cattle thefts, and it is hoped that the improvement may be maintained. **Theft.**

80. Police working as judged by judicial statistics has been on the whole more successful than in 1912, the percentage of cases convicted to cases tried, being 68 as compared with 65. In bringing cases to trial the results, however, are still poor, 56 per cent. of the total number of true cases in classes I to V never having been brought into court at all. **Police working.**

81. The security sections again met with a good deal of criticism, and suggestions have been made by officers of experience for radical alterations in the system. Reference is also made to the difficulty of insisting on good sureties and the remissness in the recovery of forfeitures. Proposals are being made for the better control of bad characters. **Preventive sections.**

82. Proposals have been made for the extension of the Frontier Crimes Regulation to some Punjab Districts, and if there is no improvement in the state of crime in the Trans-Jhelum districts in the course of next year, the question will be taken up as a whole. **Extension of Frontier Crimes Regulation.**

83. Cases of assaults on the Police and other officials while in the execution of their duty are unfortunately still much in evidence in the Western and Central Ranges. It is satisfactory to note, however, that in many of these cases the offenders met with well deserved punishment in the course of self-defence by the officers. In order to stimulate and organize popular assistance to the Police, the amount paid under Rewards has increased and may be further increased; and a large area of land on the Upper Jhelum Canal has been set aside for grants to those who render services to the Police in the districts of Rawalpindi Division. **Disregard of authority.**

84. This Department continues to do very successful work, but the enormous increase in the work has rendered its task an almost impossible one and a re-organization of the department is now under the consideration of Government. **Criminal Investigation Department.**

85. The work of the Finger Print Bureau continues to increase and the courts are realizing the advantages of the system as an aid to the administration of civil justice, fees realized for expert evidence by bureau officers having risen from Rs. 2,500 in 1907 to Rs. 7,000 in 1913. The reproduction of finger impressions by means of photography has been a subject of considerable attention. **Finger Print Bureau.**

Chemical Examiner.

86. The outturn of work has been normal. The figures relating to the decline of arsenic poisoning are remarkable. The average percentage of human poisoning cases in which arsenic was detected in the quinquennium, ending in 1902, was 60. During the next five years the Poisons Act of 1904 came into operation and since then the percentage has steadily fallen and now amounts to only 30·87. On the other hand, the percentage of poisoning by means of opium has increased to 43·26 as compared with 32·7 in 1912 and 27·05 in 1911.

Rural Police.

87. Most of the reports contain interesting remarks on the amount of assistance rendered by the people to the Police in giving effect to the river patrolling, and to the "Thikri Pahra" and "Naka Bandi" systems of patrolling. During the year 14 zaildars, 270 lambardars and 260 chowkidars were punished for neglect of their duties, but, on the other hand, a sum of Rs. 22,521 was distributed in rewards amongst 195 zaildars, 385 lambardars and 263 chowkidars and 1,449 other members of the public. From most districts there have been appeals for more money for rewards, as, with the present allotments, it is said to be impossible to reward adequately for help rendered.

Criminal Tribes.

88. The general question of the future policy of the Government in regard to the management of criminal and wandering tribes in the province has recently been a subject of investigation by a committee. The comprehensive report which has now been submitted to the Local Government is still under consideration; otherwise there is little to record except perhaps the steady improvement in the conduct of the Bauriahs, a large number of whom have taken to an honest livelihood in Ferozepore. They provided good trackers and on the occasion of cattle fairs have rendered useful assistance as temporary chowkidars.

20.—Criminal Justice.

89. Sufficient remarks have already been made under the section "Police" in regard to crime, and in this section only the working of the courts and certain special Acts need be referred to.

In the courts as a whole, prosecutions have been slightly more successful than last year, and it is hoped that with the strengthening of the prosecution agency, which is now under consideration, the gain made will not be lost again. The average duration of cases in this province, however, appears to be considerably in excess of that in the Province of Agra. It is recognized that there is a direct relationship between the speedy disposal of cases and the percentage of convictions.

Sentences to rigorous imprisonment for 15 days or less have dropped from 1,461 to 1,032, two-fifths of these sentences having been inflicted by magistrates of the 2nd and 3rd classes by whom most of the cases punishable with one month's imprisonment are tried. Sentences of from six months' to two years' imprisonment of either description have increased from 5,424 to 5,730 and of over two years from 1,585 to 1,809.

Labourers' Act.

90. This Act (XIII of 1889) is again being criticized, but the Chief Engineers, in both branches of the Public Works Department, have given their opinion in favour of its retention. It is necessary, however, that its working should be carefully watched, as its objects are often misunderstood and the Act tends to become an instrument of tyranny in the hands of unscrupulous contractors.

Witnesses.

91. Something has been done since the close of the year to remedy a very frequent cause of complaint by raising the rates of diet money payable to witnesses.

Registration of marriages.

92. Steps are being taken to extend the system of registration of marriages, particularly of "Karewa" marriages, but so far the measures taken are necessarily incomplete, as the question is a delicate one. Until this matter can be settled it seems unlikely that, with the continuing shortage of women, the lamentably great amount of litigation both in the criminal and civil courts will diminish.

21.—Prisons.

Admissions.

93. The daily average of prisoners in the jails of the province has continued to rise and now stands at 13,613, which strains available accommodation. Surplus prisoners are kept in workshops and tents and proposals for the construction of a new Central Jail at Jullundur are now before Government. This rise is due not only to the recent increase in crime, but also to the steady tendency of the courts towards longer terms of imprisonment.

Releases on appeal.

94. The number of prisoners released on appeal has increased in even greater proportion than the number of convicts sent to jail. In the period 1903—06 it was 17 per cent., last year it was 26, and is now 29.

Methods of administration.

95. There has been a remarkable diminution in the number of jail offences, and the Inspector-General claims that the improvement in the behaviour of convicts is due to the simplification of the remission system and to the fact that in jail discipline more reliance is now placed on rewards than on punishments. In 1908 there were 56,837 prison offences, in 1912, 33,724, and in the present year only 29,461. The efficiency of work does not seem to have suffered by the change of method, for the prisoners now thoroughly understand the remission system and know to a nicety how many days' remission they have earned by good work and conduct. These reforms, however, while excellent in some ways, also carry dangers with them. It may be that improved conduct in jail merely indicates a desire to escape as early as possible from irksome restraint and does not imply any improvement in character. It is therefore essential to keep in view the punitive and deterrent, as well as the reformatory aspects of imprisonment. Transportation is no longer the bogey it once was, and prison reform may be going too far if it converts what should be a penal settlement into a rescue home. There is perhaps some reason to fear that imprisonment has ceased to be a terror while, owing to the backward state of public opinion among rustics, it has not as yet become a disgrace.

Borstal system.

96. The reformatory aspect of the treatment of the prisoners is seen particularly in the Borstal Central Jail at Lahore. A brief description of this jail was given in last year's Administration Report and work has continued to develop since then, though much still remains to be done before the jail can be considered complete in every way. It is too early as yet to speak with knowledge of the results, but it is clear that every effort is being made to turn the inmates into useful members of society. The Salvation Army has taken the lead in smoothing the way for their return to freedom, convicts who desire being sent to the Army's Settlement at Danepur some months before release for post-prison treatment, and it is hoped that other religious and social organizations will in time be found able and willing to co-operate. The Muhammadan, Hindu and Sikh communities regularly send religious teachers on Sundays to the jail, but the organization which exists in England for finding employment and for generally helping such prisoners on their release is still lacking and for the supply of such organization public opinion and efforts must be relied upon. All convicts between the ages of 16 and 21, with over four months' sentences, are sent to the Borstal Institute, care being taken as far as possible to separate habitual and casual prisoners.

PROTECTION.

Expenses of maintenance and guarding.

97. The average cost of feeding a prisoner is 5 pice a day, and this is sufficient to keep a man on hard labour in health and strength. The net cost per prisoner, all charges included, is Rs. 62-4-0

Public interest.

98. The public so far do not take much interest in the management of jails, and non-official visitors, with some notable exceptions especially at Multán, did not display much interest in their duties.

22.—Civil Justice.

Institutions.

99. The total number of suits instituted indicates a slight decrease even after allowing for the exclusion of the Delhi Province. The decrease has been almost entirely in suits for money or moveable property and mainly in regard to verbal contracts. The decrease cannot be put to the credit of the Civil Panchayats Act, because there has been an unfortunate delay in setting the machinery of the Act in motion in the districts selected for the experiment. The fall in the number of money suits is remarkable in Jullundur, Hoshiárpur, Ferozepore and Gurdáspur, and this seems to indicate that the Co-operative Credit Societies which flourish in those districts have helped to diminish the litigation. Another point of interest is that suits brought by money-lenders and shop-keepers against agriculturists have dwindled from over 100,000 in 1912 to 68,500 in 1913. This is a healthy symptom and a practical vindication of the policy of the Land Alienation Act.

Disposals.

100. The disposals were normal and the pending file of original suits in subordinate courts remains practically where it was. The respective average durations of contested and uncontested regular suits, however, rose from 70 and 36 to 75 and 38 days.

Munsifs.

101. The efficiency of the Munsif's service continues to improve, and one Divisional Judge has recorded his opinion that "the work is now so extremely good that men who some years back would have been considered shining lights are now not more than average." The bulk of the original work is now in the hands of Munsifs and there is a steady decrease in the share borne by Assistant Commissioners. This is in some ways regrettable as the practical training of Assistant Commissioners in Civil work has always been a special feature of the Punjab, and one which contributes materially to their efficiency by keeping them in touch with one of the most important branches of administration. The corollary of this remark, namely, that it is also important for Civil Judges and Munsifs to be acquainted with the details of the revenue system, has been kept in mind, and it is hoped that the scheme which has now been worked out for this end by the Financial Commissioners will come into effect in the cold weather of 1914-15.

Chief Court.

102. The strength of the Court remains at seven Judges, and applications have been made for the continuance of the two appointments of temporary Additional Judges after the commencement of the vacation of 1914 when their present terms expire.

The prospect of reducing the number of Judges below seven without sacrificing efficiency may be said to have vanished, and there are indications that further additions may be necessary before long.

General.

103. The Pre-emption Act of 1913 has been severely criticized by the Judges on the ground that it encourages speculation and dishonest litigation. As this Act has only been working for less than two years, however, it is not yet time to take any steps for its alteration or repeal.

The number of insolvency applications before the Courts continues to increase at an alarming rate, and this appears to indicate some radical defect in the Insolvency Act or its working; its abuse is said to be most frequent in Colony districts, and a special report is being submitted to Government in this connection.

No definite steps have yet been taken to remedy the evils referred to in former reports in connection with the Guardians and Wards Act.

The principal event of general interest affecting the Civil courts which occurred in 1913, was the financial crisis of which the failures of the Peoples' Bank, Amritsar Bank and Lahore Bank were noteworthy examples. For a time after the close of the Peoples' Bank the rate of interest on good security rose as high as 24 per cent., and though it has now returned to a more normal figure, the effects on credit of this crisis are likely to be felt for a long time to come.

23.—Registration.

104. The outstanding features of the last three years have been the steady growth in the prosperity of the province and the remarkable rise in the value of land. This year again there has been a small increase in the number of sales affecting immovable property exceeding Rs. 100 in value, while optional registration of immovable property under Rs. 100 in value continues to decline, this being due not only to the increased confidence in mutation procedure but also to the increased value in land, which reduces every year the number of transactions in which the price recorded is less than Rs. 100. Income from registration fees has increased by 6 per cent. since 1910.

Land Alienation Act.

105. There appears to be no ground for the belief that members of agricultural tribes are transferring their town property in increasing quantities. The causes of the steady increase of leases of immovable property are, however, receiving attention, as it is suspected that alienations which are really mortgages are often shown as leases in order to defeat the provisions of the Land Alienation Act.

Establishment.

106. The minimum pay of Moharrirs was raised to Rs. 15 in 1911, but owing to the increased cost of living and to the increased registration work, definite proposals for improving their pay and increasing their number in certain offices have been submitted.

23-A.—Legal affairs of Government.

107. The number of references for opinion disposed of by the Legal Remembrancer was 910 as compared with 897 in 1912 and 856 in 1911. The Secretary of State was plaintiff in 29 original civil suits; 20 of these were decided during the year, 13 being in favour of Government and 2 against, while 5 were withdrawn.

The Secretary of State was defendant in 79 original actions out of which 48 came to a conclusion in the year, 35 of the decisions being in favour of and 10 against Government, 1 was withdrawn and 2 were compromised. In land acquisition cases which are included in the above, a total enhancement of Rs. 9,225 was given as against an amount of 2¼ lakhs claimed by the owners above the Collectors' awards. Much attention is being paid to these acquisition cases and the Government Advocate has drawn up a note pointing out the most common mistakes and omissions which he has detected in appeals conducted by him in the Chief Court: this note is being circulated to all Government Pleaders. No revenue suits were brought by and only one brought against Government during the year and in that case a favourable decision was given. The amount of important criminal case work dealt with in the legal department has considerably increased, 1,233 cases (nearly all appeal or revision cases in the Chief Court) having been disposed of as compared with 740 in 1912. Of these, over 79 per cent. resulted favourably to Government.

24.—District and Local Boards.

Elections.

108. Several district reports afford satisfactory indications that there is somewhat keener competition to serve on the Boards and greater interest than usual has been shown in the elections.

Working of the Boards.

109. The remarks made in last year's report about the growing interest of members in the work of the Boards and the assistance rendered by them in local affairs and functions and in giving valuable opinions on local topics are also relevant this year, though in some districts this interest does not take the form of action leading to practical results. The extent of practical interest manifested depends largely on the efforts which the District Officer makes to encourage it, and one of the most effective ways of doing this in the present state of local self-government is held to be that the Board should delegate responsibility to individual members or to sub-committees and thus provide a test of their energy and capacity. This system of sub-committees has therefore been extended considerably and local sub-committees as distinct from Local Boards have also been formed in some districts. It is noteworthy that it is chiefly in districts in which an attempt has been made to decentralise that real practical interest in matters administered by the Board has been shown by members.

Works.

110. The Sialkot District Board has started a demonstration farm which, if properly organized and supervised, should serve a very useful purpose. The Gujránwála and Karnál Boards are contemplating the foundation of industrial schools and such a school is already in existence in Amritsar.

Revenue.

111. The gross income of the boards continues to increase materially, and amounted this year to nearly 79½ lakhs as compared with 64½ lakhs in 1912-13. The local rate accounts for 3¼ lakhs of this increase and the balance is chiefly due to large subventions from Government, which are further described in section 45. With effect from the 1st April 1913, the contribution of 20 per cent. on the local rate which had up to that time been paid to Government for certain general services was remitted, and at the same time various smaller contributions which had previously been paid by Government to the boards were resumed. The policy of general grants-in-aid not ear-marked for specific purposes is approved by Government, as it leaves more scope for initiative in the expenditure of board revenues.

Veterinary.

112. The Veterinary dispensaries continue to gain in popularity in the greater part of the province. In Gurdáspur two were established by private enterprise and one by the Board. Marked progress has been made in the Ambála Division, three having been built in Gurgaon District, one in Rohtak, one in Ambála and five in Hissar.

Cattle-breeding.

113. The majority of districts are substantially increasing the number of bulls and the demands on the Hissar Cattle Farm were so heavy that they could not be fully met. The system of selling the bulls at half price to the villagers has not met with uniform success but has intrinsic merits, as it is obvious that much greater care will be taken of an animal which belongs to the village than of one which is merely entrusted to the care of a headman.

General.

114. Opinions have recently been taken concerning a proposal to empower District Boards by legislation to levy a land cess for the development of light local railways and tramways. This matter is now under the consideration of Government.

Rural sanitation is also being taken up, but it is doubtful whether any real improvement can be effected without special legislation on the lines of the Village Sanitation Act in force in the United Provinces.

25.—Municipal Administration.

Elections.

115. Though municipal elections as a whole seem to be raising a little more interest every year, it is only in a few larger municipalities that any marked enthusiasm is shown. Elsewhere, except where sectarian feeling runs high, the public is usually apathetic. The proportion of vacancies

contested was the highest in Ráwalpindi Division, standing at 14 out of 23 seats, whereas in the Multán Division there was only one contest for 34 vacancies. There is a tendency for better men to come forward as candidates, and it may be hoped that in course of time the best will not think it beneath them to seek the suffrages of their fellow-citizens. Many of these appear at present to be deterred from competing on account of the objectionable practices of some lower class candidates, which, according to one Deputy Commissioner, cause men of social standing to be ousted by "demagogues and wealthy plebeians." The elective system, however, has come to stay, and it is to be hoped that its abuse will gradually be eradicated by the growth of public spirit and that more men of standing will come forward as candidates.

Meetings and attendance.

116. Meetings were held with satisfactory regularity by all larger committees and with some notable exceptions the attendance of members has been good.

Working of committees.

117. The working of committees is reported to be generally satisfactory except where religious and social jealousies are prominent. Sub-committees continue to do useful work in most municipalities, and in order to encourage the growth of local self-government the question of replacing official office bearers by non-officials has been examined, and it has been found possible to appoint non-official presidents to a considerable number of committees.

Finance.

118. The aggregate income of municipalities rose from 66 to 76½ lakhs, the increase being mainly due to larger contributions from Government. Such contributions amounted to nearly 14 lakhs. The most important grant was one of 9 lakhs to the Lahore Municipality for its sewage scheme.

Sanitation.

119. Considerable attention is being now given to urban sanitation. Government recently issued a Resolution enjoining the employment of qualified Health Officers and Sanitary Inspectors in the larger municipalities, and has instituted a class for training sanitary inspectors. A resolution has also issued dealing with town-planning, town extensions and improvement of congested and insanitary areas. Town-planning is becoming an important matter owing to the tendency of well-to-do residents of larger towns to build dwelling houses in the suburbs.

General.

120. Though the working of several committees still leaves much to be desired, yet a genuine public spirit is undoubtedly developing, especially in larger towns where the committees not only do good work within their own spheres of duty but also show a willingness to co-operate with the administration in other matters relating to the well-being of their communities.

TAXATION.

121. Despite defects, octroi continues to be the most popular form of taxation for it has the sanction of custom and is an indirect tax. The system of terminal taxation avoids many of the disadvantages of octroi and is now finding some favour; such a tax has, since the close of the year, been sanctioned in Sargodha and proposals are under consideration in about 10 other municipalities; among these is Kasur where the octroi refunds amounted to not less than 68 per cent., a fact which should clearly illustrate the cumbrous nature of this mediæval tax. The conservancy tax of Simla and the water-tax of Lahore have been abolished. Direct taxes, such as the house tax and profession tax, are as unpopular as ever, though an indefinite impost varying with the means or circumstances of each tax-payer and known as a "*Haisiyat*" tax has at times found favour in small urban communities. This tax has been held to be illegal, but it has been suggested that it should be legalized on the lines of the United Provinces Small Towns Act.

26.—Military (Volunteers).

Strength and Distribution of Volunteer Forces.

122. The strength of the Volunteer Corps on the 31st March 1914 is reported to have been as follows:—

Corps.	Company.	Station.	Officers.	Non-Commissioned Officers.	Privates.	Total enrolled strength.	Total number of efficients.	Sergeant-Instructors.	Remarks.
Punjab Light Horse.	...	Field Officers and Staff ...	8	...	...	8	8	4	
	A	Lahore	4	17	105	126	120	...	
	B	Ambala	1	5	45	51	51	...	
	C	Rawalpindi	3	11	54	68	64	...	
	D R½	Peshawar	1	5	19	25	24	...	
	D L½	Amritsar	1	2	10	13	11	...	
	Detachment	Delhi	1	7	32	40	39	...	
	E	Lyallpur	...	4	11	15	15	...	
		Multan	...	...	2	2	2	...	
		Jhang	...	...	...	...	...	...	
		Sargodha	...	1	...	1	1	...	
		Montgomery	...	1	5	6	6	...	
	...	Reservists	1	...	81	82	82	...	
	...	Add for Supernumerary Officers	10	...	...	10	...	...	
		Total ...	30	53	364	447	423	4	
1st Punjab Volunteer Rifle Corps.	...	Field Officers and Staff ...	12	...	...	12	12	9	
	A, B, C and Cadet ½ Company.	Lahore	10	31	197	238	211	...	
	D	Rawalpindi	2	11	74	87	84	...	
	E	Amritsar	3	9	55	67	67	...	
	F	Delhi	2	9	68	79	76	...	
	G	Murree	2	8	65	75	74	...	
	H	Do.	1	9	49	59	58	...	
	I	Peshawar	3	15	116	134	134	...	
	K	Ferozepore	2	11	97	110	109	...	
	L	Srinagar	5	7	60	72	68	...	
	M	Sialkot	1	5	42	48	47	...	
	...	Reservists	...	...	149	149	149	...	
	...	Add for Supernumerary Officers	18	...	...	18	...	...	
		Total ...	61	115	972	1,148	1,089	9	
Simla Volunteer Rifle Corps.	...	Field Officers and Staff ...	11	...	...	11	11	5	
	A, B, C, D, E and H.	Simla	20	60	383	463	417	...	
	F and G	Sanawar	2	16	144	162	162	...	
	...	Reservists	3	...	84	87	53	...	
	...	Add for Supernumerary Officers	18	...	...	18	...	...	
		Total ...	54	76	611	741	643	5	
North-Western Railway Volunteer Rifle Corps.	...	Field Officers and Staff ...	14	...	...	14	14	6	
	A, B, C and D	Lahore	12	46	517	575	575	...	
	E	Ambala	2	12	157	171	171	...	
	F	Saharanpur	2	7	118	127	127	...	
	G	Rawalpindi	4	18	155	177	177	...	
	...	Reservists	...	...	31	31	31	...	
	...	Add for Supernumerary Officers	1	...	...	1	...	...	
		Total ...	35	83	978	1,096	1,095	6	

The Punjab Light Horse, the 1st Punjab Volunteer Rifles, and the North-Western Railway Volunteer Rifles were inspected in March 1914 and the Simla Volunteer Rifle Corps in May 1913.

The results were considered satisfactory.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1914.

(2) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1913-14.

(3) Annual Report of the Government Cattle Farm at Hissár for the year 1913-14.

(4) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1913.

(5) Report on the working of Co-operative Credit Societies for the year ending 31st March 1914.

Weather and Crops.—(1) Report on the weather of the Punjab for the year 1913-14.

(2) Punjab Season and Crops Report for 1913-14.

Horticulture.—Report on the Government Agri-Horticultural Gardens, Lahore, for the year ending 31st March 1914.

Forests.—(1) Progress Report of Forest Administration in the Punjab for 1913-14.

(2) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1913-14.

Arboriculture.—Progress Report on Arboriculture in the Punjab for the triennial period 1911-12 to 1913-14.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1913.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year ending March 31st, 1914.

(2) Report on the External Land Trade of the Punjab for the year 1913-14.

(3) Report on the Joint Stock Companies in the Punjab for the year 1913-14.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1913-14.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1913-14.

(2) Land Revenue Report as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—(1) Statistics of British India, Part II, Commercial (Co-operative Credit Societies).

(2) Administration Report of the Army Remount Department in India for the year 1912-13.

Crops.—(1) Agricultural Statistics of India, volume I, tables 2-I and 3-I.
(2) Area and yield of certain principal crops in India.
(3) Prices and Wages in India.
(4) Variations in Indian Price Levels, 1914.

Forests.—Statistics of British India, Part IV (*b*), Finance and Revenue.

Mines and Quarries.—(1) Statistics of British India, Part I, Industrial.
(2) Records of the Geological Survey of India, volume XLIII, Part 2.
(3) Report of the Chief Inspector of Mines in India under the Indian Mines Act (VIII of 1901) for the year ending 31st December 1913.

Manufactures.—Statistics of British India, Part I, Industrial.

Trade.—(1) Accounts of the Trade carried by Rail and River in India.
(2) Statistics of British India, Part II, Commercial (Joint Stock Companies).

Railways.—Administration Report on Railways in India for the calendar year 1913.

Irrigation.—Statistics of British India, Part III, Commercial Services.

PRODUCTION AND DISTRIBUTION.

27.—Agriculture.

SCIENTIFIC.

General.

123. The progress of a department of this kind which has at the same time something to learn and much to teach, can hardly be measured by the intervals between annual reports, but no one whose memories of the Punjab travel back for a generation can fail to find matter for optimistic reflection in the history of the Department. There are two great obstacles to the conversion of the agriculturist to scientific methods of agriculture; one is the inexperience of the instructor (for an intimate knowledge of, and sympathy with, local conditions and the people is necessary for the propagation of new methods successfully) and the other is the absence of an intelligent response on the part of the instructed. On the one hand, the scientist has to graft his western methods in an eastern country, and by research and experiments to discover what modifications of these methods have to be made, and, on the other hand, he has to overcome the conservatism of the ages in unscientific cultivators suspicious of new methods, and apt to be discouraged by occasional failures. The vigorous efforts of the Department and the individual enterprise of more enlightened cultivators are undoubtedly, however, gradually gaining ground.

Experiments and Research.

124. Owing to adverse climatic conditions the year has not been favourable for experimental work with regard to wheat; experiments with indigenous cottons continue, but without any decisive results at present. An important test in reclamation is now in progress at Narwala which, if successful, should have far-reaching results in view of the large alkali-affected tracts in the Punjab, which are at present unfit for cultivation; progress, however, on the work has not been very rapid. Investigations in connection with the wheat weevil, cane-borers, and other pests have been continued, and among the minor activities of the Department there has been some progress in sericulture, while olive cultivation is also receiving attention. A lease of 3,000 acres on the Lower Bari Doab Canal has been given on condition that the lessee grows 400 acres of American cotton every year for seed and also grows other seed for the Department. Another interesting lease, also on the Lower Bari Doab Canal, is that of 2,000 acres to Sardar Jogendra Singh on condition that he cultivates the land by Fowler's double engine system of steam ploughing. This should enable a test of steam ploughing to be made thoroughly at no cost to Government.

Lyallpur College.

125. When the Agricultural College at Lyallpur was started, it was in the hope that sons of agriculturists would flock to it with a view to receiving a training which they should apply in their own walk of life, but these hopes did not show any promise of fulfilment and they may be said to have been laid aside by the Board of Agriculture when it resolved that such Colleges must be regarded primarily as training places for members of the Agricultural Department. The course has been modified accordingly, but there is also a Vernacular course which lasts only for six months and is meant to give practical manual training in the use of implements and this course is attended by the sons of genuine agriculturists, the hope being expressed that the course may ultimately prove to be one of the most practically important branches of the Department's operations.

Agricultural Associations.

126. The staff of the Agricultural Department tour in many districts and occasional demonstrations of implements are also given at fairs. Special agricultural associations have also been formed in several districts which give promise of rendering useful service to the agricultural community by demonstrating and extending the improved methods of agriculture. Each Agricultural Association consists of some 50 to 70 intelligent landowners and cultivators under the presidentship of the Deputy Commissioner, and every zamindar member is required to carry out some agricultural operations or to use some implements in the way recommended by the Department. A few implements are lent free of cost for a year or

so to members who have to give them a trial. An Agricultural Assistant is also posted to the district and tours round to the members advising and assisting them. There are two meetings a year at which the results of the operations undertaken and reported are discussed.

Popularization of improved methods by means of Co-operative Credit Societies is another measure which is being adopted and which may ultimately be more successful than the formation of separate Agricultural Associations. The Societies have been useful as seed distributors and in arranging demonstrations, and it is hoped to make co-operation in agriculture and in the marketing of produce a pendant to co-operation in credit. In this connection it may be noted that an attempt is being made to induce zamindari Co-operative Credit Societies to send boys to the Vernacular Classes at Lyallpur College. The Registrar of the Co-operative Credit Societies is also assisting with a scheme to train men in this class, who will then be employed by Societies as Agricultural Sub-Inspectors.

Implements.

127. Sales of ploughs and other implements have continued at about the same rate as before and the progress is as great as can be expected in the conditions. Demonstrators are employed with the hope of increasing sales, but it is recognized that the best demonstrator is a cultivator who has himself used an implement and found it profitable and increase in this class of demonstrators is bound to be slow at first.

Staff.

The superior staff of the Department has been increased by the appointment of two more Deputy Directors; and the new Agricultural Engineer will, it is hoped, shortly be entering upon his duties.

Loans to Agriculturists.

128. Loans amounting to nearly 2½ lakhs were advanced under the Land Improvement Loans Act and rather more than 5 lakhs under the Agriculturists' Loans Act. The outstanding balance at the beginning of the year was rather over 19¾ lakhs. Over 6¼ lakhs were due for collection during the year, and the actual collections made amounted to Rs. 6,35,000. The outstanding balance at the close of the year was almost 21 lakhs, of which over Rs. 43,000 were suspended by competent authority and rather more than Rs. 16,000 were overdue. Under the Land Improvement Loans Act, the advances were chiefly for sinking wells, while the majority of the loans under the Agricultural Loans Act were required for the purchase of bullocks and advances for fodder and seed. The interconnection between the co-operative movement and the Loans Acts has been noticed in Section 16, above, and it only remains to add that the necessity of legislation with a view to legalize Takavi advances to co-operative societies was under discussion during the year. There is, however, no legal objection to loans intended for members of co-operative societies being distributed through the agency of these societies, and the Financial Commissioner has under consideration the advisability of adopting this method.

Co-operative Societies.

General.

129. The year has been a critical one for the co-operative movement in the Punjab on account of the disturbed financial situation due to the failure of some Indian banks, and the Registrar has very wisely devoted most of the energies of himself and his staff to the strengthening and consolidating of the existing societies rather than to expansion. As a result the number of new societies was less than in either of the two preceding years, but the number of members increased by 27,000 and now stands at 161,000. The financial progress of the societies, however, seems to have been unaffected as the total working capital has increased by over 76 lakhs and now stands at 184¼ lakhs for 3,333 societies. Such excellent results were hardly to be expected in view of the unsettled financial situation, and are a remarkable proof of the hold which the movement has succeeded in obtaining in the Province in spite of the fact that ten years have not yet elapsed since its inception.

PRODUCTION AND DISTRIBUTION.

Central Banks and Unions.

130. The working capital of the Central Societies has increased by about 16 lakhs, of which amount the Central Banks contribute some 11 lakhs. Practically all the Central Banks are doing well, and on the whole repayment of loans by the societies is satisfactory. The fact that the demand for loans is very irregular, makes it difficult to decide when to accept deposits, but with a view to regulating the excesses and deficiency in each district it has now been decided that the managers should send one another weekly information of their surplus and probable requirements; this scheme, however, has not yet been brought into effect.

Three new Unions were formed during the year. The difference between a Union and a Central Bank is that the former has as shareholders no individuals but only those societies which compose it. The result is that there is a closer and more sympathetic relation between the members of a Union than between those of a Central Bank.

Agricultural Societies.

131. The drop in the amount of deposits and increased withdrawals are the most marked features of the working of agricultural societies, but it is satisfactory to learn that the panic which led to the closure of so many Indian banks and even to a serious run on the Post Office Savings Bank, had comparatively slight effect on these rural banks.

There are now 3,261 village societies spread over 25 districts; in each society the average number of members is 47, and there is an average sum of Rs. 85 available for loans to each member as against Rs. 75 in the previous year. More than a crore of rupees are out on loan to members, 71 lakhs having been given out during the year and 40 lakhs repaid. Particular attention is paid to the punctual repayment of loans, and there has been improvement in this respect. A new rule has been passed for defaulters under which the Registrar has power to decide disputes himself or by the appointment of an umpire in cases where a man refuses to pay; the decision is treated as the decree of a Civil Court. For several years there has been a demand for some such summary procedure, and it will strengthen the hands of the managing committees.

The profit earned by the agricultural societies during the year is over 6 lakhs. If one quarter of this were put to reserve, the balance would allow a dividend of 15 per cent. being declared on the shares. Societies are gradually awakening to the possibilities of agricultural development. A good deal is now done in the way of joint sale of produce. In about a quarter of the societies of the Jhelum Colony, the members of each society sell their produce jointly through one or two enterprising members and realize better prices by selling when rates are high. A beginning has also been made in the purchase by Unions and individual societies of selected wheat and cotton seed from the Agricultural Department. Improved ploughs are coming into general use, bought both by societies and individuals.

Non-agricultural societies.

132. There has been no expansion under this head, though the societies show some progress. The 12 Weavers' Societies made a profit of 10 per cent. and the two Shoemakers' Societies show a profit of 90 per cent. on the share capital. Of the non-industrial societies by far the largest is the Lahore Government Servants' Society, of which the working capital is now 5½ lakhs, the deposits of members and non-members being equally divided. There are also 4 produce-selling societies and some of the members of one of these have, with the help of a loan from the society, taken part of the lease of the principal ginning mill at Pattoki. This is an important development, for until ginning comes into trustworthy hands, it is difficult to see how unmixed cotton can be exported and sufficient quantity of pure seed be available for future sowings.

Audit.

133. The cost of the societies to Government works out at an average of Rs. 11 per society, whereas five years ago it was Rs. 51. The Lieutenant-Governor has recently approved the scheme of taking contributions from societies to pay for the cost of audit, and this will enable the Registrar to

carry out his policy of moving on the staff paid by Government to new districts, in which the movement is still to be organized and fostered. The contribution will be at the rate of 5 per cent. on the annual profits, and will for the present only be levied from societies which voluntarily impose it on themselves by a resolution.

Developments in co-operation.

134. There can be no doubt as to the improvement effected in agricultural credit by means of agricultural societies, and it has been noticed that there has already been a substantial decline in the rate of interest demanded by money-lenders from agriculturists even in villages where societies do not actually exist. Among their miscellaneous activities it may be mentioned that these societies are also becoming awakened to the necessity of more school education for their children; they also continue to exercise a powerful check against extravagant expenditure on marriage ceremonies and the like. Their action in the matter of reduction in litigation and in the propagation of scientific agriculture has already been noticed and in many other ways they conduce to the advantage of the members. It is estimated that the amount of indebtedness already cleared off by means of co-operative societies exceeds one crore, and there are indications that the money-lending classes are beginning not only to realize the futility of opposing the movement but also to invest a part of their capital in it. A spirit of energy and self-respect is being created among the peasants where formerly there was often only apathy, fatalism, or despair.

Veterinary and Live-stock.

General.

135. The Veterinary Department is making steady progress in winning the confidence of the people, which is an indispensable condition of success. No better proof of such confidence could be forthcoming than the fact that many private individuals have come forward to establish Veterinary Hospitals.

College.

136. The working of the College is satisfactory and the percentage of passes among second and third year students has improved. The demand for admission continues to be very great and many of the candidates have to be refused. The demand for graduates is also exceedingly great not only for the Punjab, but also for other provinces, for Native States, for abroad, for the Transport and Remount Departments and for Mountain Batteries. There is thus a good case for the establishment of a second Veterinary College in Northern India, and this matter is now under the consideration of the Government of India. In the meantime, sanction has been given for new buildings for the Lahore College, and these are nearing completion.

Hospitals.

137. The number of hospitals has risen to 114 as against 113 in the previous year, the addition being a hospital built by private enterprise in Gurdáspur District; other hospitals, also the result of private enterprise, are under construction. The total number of cases treated at the hospitals has risen considerably.

Miscellaneous.

138. Efforts are being made to keep Veterinary Inspectors and Assistants up-to-date in their professional knowledge by means of local conferences presided over by a superintendent. A still more interesting and valuable experiment is that of giving lectures and demonstrations in villages.

The Veterinary Association, which was established last year, has proved a success and the quarterly journal in vernacular has done well.

During the year 11,522 villages were visited by different members of the Veterinary staff on tour and 102,447 animals were treated as against 9,948 villages visited and 63,416 animals treated in 1912-13. The Chief Superintendent considers that touring is the best method by which the amount of good work the department can do, may be demonstrated to the people.

PRODUCTION AND DISTRIBUTION.

In connection with breeding operations and epidemics there is nothing to record except that the number of castrations has greatly increased, the figures standing at 15,154 this year as compared with 2,268 which seems to show that the people are beginning to realize how undesirable bulls do harm.

GOVERNMENT CATTLE FARM, HISSAR.

139. The Hissar Cattle Farm has suffered from a partial failure of the rains for the third year in succession. This means increased expenditure on the keeping of animals, and also involves risks to the stock. Financially, the position of the Farm shows an improvement. The value of the stock has risen from 4·62 lakhs to 5·28 and the income from Rs. 86,366 to Rs. 97,389.

The number of bulls issued (637) is the highest on record and the Director of Agriculture mentions a case in which Rs. 1,300 was paid for a single animal. The increasing interest in the improvement of the breeding of cattle is a very healthy symptom, and the steady distribution of well-bred bulls from the Farm must in time raise the standard over most of the Province. To secure this result it is very necessary that the supply should be equal to the increasing demand.

28.—Weather and Crops.

Character of the season.

140. The period from the middle of February to the middle of March 1913 was unusually wet, and conditions were therefore very favourable for sowings of sugarcane and cotton on irrigated lands and preparation of the land for autumn sowings. April was unusually dry, but precipitation in the 3rd week of May was abnormally heavy, and this, combined with the early setting in of the monsoon in the second week of June, stimulated extensive sowing of cotton, even at the expense of other crops. The rainfall of July, though in defect at most stations, was on the whole sufficient, but in August during which there were only two well-defined periods of wet weather, *viz.*, from the 2nd to 8th and 25th to 30th, the precipitation was very irregular, Ambála, Lahore, Ráwalpindi, Khushab and Multán receiving more than their normal quantity, while the rest of the Province had a deficit. The monsoon withdrew from the Punjab altogether at the beginning of September, the slight falls in the 2nd week being connected with disturbances of extra Indian origin, but the rainfall of the earlier months was sufficient to mature a good autumn crop everywhere except in the south-east, where the unirrigated crops failed seriously. The conditions were especially favourable in the west and north-west of the Province, and in parts of the latter area the harvest was a bumper one.

Although October and November were practically rainless, and inundation canals stopped flowing early, abundant rainfall up to the middle of August left sufficient moisture in the soil for the sowing of the spring crop except in the south-east, where the August rainfall was insufficient, and in consequence unirrigated sowings were seriously restricted. In the north-west and west the area sown was considerably above normal. Showers in the first three weeks of December and at the beginning of January were general except in the south-east, and benefited the standing crops. A long spell of dry weather lasted until February 13th, when a well marked depression gave abundant precipitation both in the hills and the plains, and immensely benefited the crops, except in the south-east where the rainfall was too slight to revive them. In March precipitation was in defect, but the weather was abnormally cloudy and showery, and thunderstorms damaged the gram in places. The continuance of these unsettled conditions accompanied by hail up to the end of the third week in April caused some anxiety, but clear hot weather at the end of April and beginning of May permitted general reaping to be completed. Rain in the second week of May and at the beginning of June retarded harvesting operations, but fortunately did little damage to the grain. Like the

autumn crop, the spring crop was good everywhere except in the south-east, and was especially good in the north-west and west. In parts of the south-east there was a severe scarcity of fodder between December and May.

Sown and cropped areas.

141. The total sown area was 1 per cent. less than in the previous year and 3 per cent. less than the estimated normal, but, owing to more favourable conditions, the total matured area was 1 per cent. better than in 1912-13, and only 2 per cent. below the estimated normal.

Chief staples.

142. The sown area of wheat amounted to nearly 8½ million acres, and though this is 3 per cent. less than the last year's area, it is only one per cent. below the estimated normal. The falling off is due to the unfavourable conditions at sowing time. In the south-east 53 per cent. of the area was irrigated. The season was favourable except in the south-east, and the total yield is estimated at 2,760,458 tons, or 15 per cent. above the normal, the percentage for irrigated and unirrigated wheat respectively being 119 and 110.

The out-turn of the other principal crops as compared with the estimated normal outturn is given in the following table:—

Name of Crop.	Outturn in percentage of estimated normal.
Gram	85
Barley	92
Cotton	173
Jowar	60
Rice	120
Bajra	91
Maize	105
Sugarcane	115
Oilseeds	88

Irrigated Area.

143. The total irrigated area was 11¾ million acres or 48 per cent. of the total area sown. This is 2 per cent. more than in the previous year and is considerably above the average, which is due partly to the scarcity of rain in some months and partly to the opening of the Lower Bari Doab Canal and to a good supply of water in some inundation canals in the west.

Agricultural stocks.

144. The quinquennial cattle census was held in February 1914. Since the last census the seasons have been favourable in the Punjab, as a whole, but in the south-east dry area, which contains the famous Hariána tract, the autumn crops, which are the important ones for cattle, have been very short and fodder and grazing have been scarce and dear. So too, both in 1911 and 1912, the rains were scanty in the Ráwalpindi Division and Montgomery and the grazing poor. Thus it is in the chief cattle breeding districts that conditions since the last census have been unfavourable. The number of cow-buffaloes, cows, bullocks, horses and ponies, donkeys, camels and goats has increased, but the number of mules and male buffaloes has decreased. The total of sheep remains almost stationary.

One of the noteworthy features of these statistics is the decrease in the number of male buffaloes which is attributed to the general well-being of the cultivators during the last few years having enabled them to replace their buffaloes by bullocks, which means a rise in the social scale. The male buffalo, owing to its sluggish nature and its inability to endure heat, is being found a beast fit only for the poorest ploughman or carter.

29.—Horticulture.

Agri-Horticultural Gardens, Lahore.

145. The income from the sale of garden produce shows a slight increase and is sufficient to cover three-fifths of the expenditure. The financial

PRODUCTION AND DISTRIBUTION.

position is highly satisfactory, and will enable some much-needed improvements to be carried out.

The great majority of the 34 new varieties of eucalyptus planted in March last year are doing well. A five years' scheme for the improvement of the gardens has been published. During the year the Superintendent has visited 30 gardens in various districts to give advice on decorative gardening and fruit culture. Interest in fruit appears to be rapidly increasing and there is no reason why, with proper care and methods, the Punjab should not produce as good oranges as it does wheat.

There are now 25 boys and men in the three gardening classes and all are very keen and making progress.

30.—Forests.

Forest Department.

General.

146. With the annual report for 1913-14, there has been submitted a summary of the progress during the five years 1909-10 to 1913-14. During this time there was a decrease of 700 square miles in the area under the charge of the Forest Department, 384 square miles being due to the transfer of land to the Canal Department for colonisation, and 244 square miles of Guzara (Unclassed) forests in Rawalpindi, having been incorrectly shown on the books of the Forest Department, were struck off and 12 square miles of Protected Forests were made over to the Civil authorities.

The expenditure on communications and buildings increased gradually during the period, this being in accordance with the policy that such expenditure is necessary to develop the resources of the forests and to ensure the health of the staff.

The number of forest offences has risen from 7,379 in 1909-10 to 11,951 during 1913-14. This continued increase is chiefly under the head of illicit grazing, and there is no probability of any decrease taking place in the immediate future, for, with the progress in sylvicultural operations and more supervision, there must inevitably follow a greater need for preventing the occurrence of forest offences and an increase in the number of offences reported. Comparing the first with the last year of the quinquennium the annual out-turn of timber has increased by about 25 per cent. owing to the increase in operations and that of firewood has decreased by about 28 per cent. owing to the decreased areas of fuel reserves under the department's control on account of colonization. The quantity of timber removed departmentally has decreased by about 39½ per cent. in pursuance of the policy of favouring extraction through contractors; on the other hand the departmental extractions of fuel rose considerably (50 per cent.) on account of the larger fellings in certain plantations and by the adoption of departmental fellings in the Rawalpindi Division for the supply of fuel to the Military Department.

The gross revenue of the department rose from Rs. 9,75,486 to Rs. 13,57,527, the expenditure from Rs. 6,78,333 to Rs. 9,25,748, and the surplus from Rs. 2,97,153 to Rs. 4,31,779.

The work of the Forest Department in the Punjab is not confined to the Government forests. It is intimately concerned in various ways with the forests of many Native States; sometimes, it has the entire management of those forests, but, when possible, the Chiefs are encouraged to take personal control and management, the department merely assisting by advice and training and sometimes by deputing trained officers. Even in British territory the general forest policy is tending more and more to a diminution of the control of the Forest Department. During the period under review considerable areas formerly under control of the department have been placed under the charge of the district officers, and in the case of Guzaras of the

Ráwalpindi Division and certain areas in Kángra, the revenue obtained by the department is handed over to the district officers for distribution among the villages concerned or for expenditure by district boards.

Observations on the more important matters of the year 1913-14 are given in the following paragraphs.

147. There was a deduction of 262,064 acres, mainly due to the land given up for colonization purposes, chiefly in the Montgomery Division. Further similar reductions are expected in this and other districts where large areas amounting approximately to 800,000 acres are being disforested for colonization purposes. When this is done a very large portion of the plains forests under the charge of the Punjab Forest Department will have disappeared. **Area.**

148. The success of the new Guzara rules in the Ráwalpindi Division is still doubtful, and from a short inspection of certain Guzaras near Murree, it appears that here at least little check has been put upon the rapid destruction of the Guzara forests. The Deputy Commissioner, however, is endeavouring to make the influential villagers feel their responsibility for the protection of their Guzaras, and it is expected that this will do much towards attaining the desired object. **Forest Settlements.**

An important fact with regard to forest conservancy in Hoshiárpur has been settled this year. The settlement did not clearly state that the trees required by villagers had to be marked by a forest officer and they were being cut without restriction. A search of old records has proved that the villagers have no right to cut trees without permission and the necessary proviso has been entered into the record of rights.

149. Sanction was accorded during the year to the revised working plan for the Dalhousie range of forests of Chamba State, but beyond this no other new working plans were prepared and sanctioned during the year though considerable progress has been made in the preparation of revised working plans for the Murree and Kahuta forests. The area still requiring working plans remains the same as five years ago, *viz.*, 164 square miles, it having been found possible to undertake only the revision of the existing working plans as they expired. **Working plans.**

150. Increase in the number of detected offences has already been remarked upon. In the matter of protection from fire, there were encouraging indications from the Ráwalpindi Division, where only 7 fires covering ten acres took place as compared with 29 fires covering 745 acres last year, and the villagers turned out with the greatest alacrity to extinguish the few fires which occurred accidentally. From this, if progress is maintained, it may be surmised that the villagers have at last realized and begun to appreciate the efforts which are being made by the department to ensure them against destruction of their forest areas. The number of cattle impounded was 19,740, as compared with 24,655. **Protection.**

151. The year was a bad seed year for almost all species. Deodar and Chil failed in every division, while Kail is reported to have seeded very well only in the higher hills of Ráwalpindi where it is rapidly establishing itself at the expense of other species. Normal operations were undertaken with varying results in artificial reproduction. **Reproduction.**

152. The experiment for the improvement of shisham regeneration was continued during the year; the cost is not likely to exceed Rs. 8 per acre, and considering that there will probably be a difference of between Rs. 120 and Rs. 160 per acre in the value of the outturn, the operation is financially extremely profitable. **Experiments.**

Departmental firing experiments were carried out in the chir forest of Ráwalpindi on a much larger scale than the previous year and with greater success, 2,100 acres were burnt over and the trees sustained hardly any damage even where there was a considerable growth of bushes.

PRODUCTION AND DISTRIBUTION.

The results of the eucalyptus experiments in the Simla hills were on the whole satisfactory though the year was an extremely unfavourable one on account of the early cessation of the monsoon. In other divisions, the eucalyptus has not succeeded as well as was predicted.

The resin factory at Shahdara continued to work until the end of February when the work was discontinued in order to prepare for the erection of a new plant which is of French design and has been obtained through the India Office at a cost of Rs. 29,000. It is capable of dealing with 40,000 maunds of crude resin annually, the present estimated maximum annual output of resin of Punjab forests. The Shahdara factory having been damaged by floods, a scheme is on foot for the erection of a new factory at Jallo Railway Station, 9 miles east of Lahore. Considering the small scale of operations possible with the existing plant, the financial results have been satisfactory.

Outturn.

153. The total outturn of timber decreased by over 2½ million cubic feet, the main causes being an over-stocked market in Kángra and smaller sales from thinnings in Kulu. The out-turn of firewood increased owing to the larger fellings in certain forests in the Lahore Division and to the clearing of the areas in the Chenab, Montgomery and Multán Divisions for colonization.

Financial results.

154. The total revenue of the year was Rs. 13,57,527 as compared with Rs. 12,58,902, a net increase of Rs. 98,625. The expenditure of the year was Rs. 9,25,748 as against Rs. 8,09,072 in 1912-13.

Fruit culture.

155. These operations were, as hitherto, confined to the Kulu and Simla Divisions. In the former no new orchards were started, but the existing orchards are reported to be in good order and well stocked. Several consignments of apple, orange, cherry and plum-trees were procured from Australia and put out in new orchards, and are doing well. Apple grafting is now thoroughly understood and failures are comparatively few. Among zamindars themselves progress has been made in extending fruit culture, and numerous applications were received for the service of the orchard gardeners and for grafts. In the Simla Division matters were not so satisfactory, various serious diseases having occurred among the trees.

The experiments in olive cultivation are proceeding and steady progress is reported. The olive trees have now commenced to bear fruit in small quantities, and it will soon be possible to say whether this fruit is sufficiently good to compete with European olives.

ARBORICULTURE.

District Boards and Municipalities.

156. The total length of avenues under the district boards and some municipalities in the Punjab at the commencement of the triennial period 1911-12 to 1913-14 under review was 9,014 miles and at its close 9,368 miles, showing an increase of 356 miles as compared with one of 712 miles in the previous triennium.

The total length of roads suitable for planting up with avenues is 15,251 miles, out of which 60·3 per cent. had been planted up prior to the beginning of the period under review. The increase during the period was 1·1 per cent., making a total of 61·4 per cent.

In all districts where avenues were planted the length planted exceeded the length of failures, and it is satisfactory to note that in several districts in which considerable lengths of avenues were planted there were no failures, Siálkot (100 miles) being conspicuous in this respect.

For the purpose of arboricultural returns the districts are classified into four groups and the following statement shows the progress made in each group :—

	Length planted in the triennium.	Length failed in the triennium.	Percentage of total length planted to length suitable for planting.
	Miles.	Miles.	
Arid districts	223	29	50
Very dry districts	59	13	61
Dry districts	272	126	53
Fairly moist districts	330	44	87

The area under groves has slightly increased during the triennium, but this is due to the transfer of certain areas from Canal to District management, the actual area successfully planted being only 31 acres, while that over which operations failed was 36 acres.

The area under plantations now stands at 1,081 acres as compared with 1,812 acres at the beginning of the triennium, but this decrease is more than accounted for by the transfer of 939 acres to the committee of the notified area, Delhi, and excluding other technical changes there has been a real increase of 8½ acres in the area stocked.

The area under nurseries increased from 278 acres to 1,327, this being almost altogether due to the transfer of an area in Shahpur District from the Canal Colony to District management.

The gross revenue from arboriculture during the period under report amounted to Rs. 9,41,000 or Rs. 1,72,000 in excess of that realised in the previous triennium, while the expenditure was Rs. 11,92,000 or Rs. 29,579 in excess of that incurred in the previous triennial period.

Canal Arboriculture.

157. As compared with the previous triennium the length of roads and canals suitable for avenues increased from 9,102 to 10,596 miles and the length actually planted rose from 5,313 to 6,235 miles. The length of avenues successfully planted was 1,184 as against 790 miles and the failures amounted to 196 as against 220 miles. There has thus not only been an increase in the length successfully planted, but also a decrease in the length of failures.

There are no groves under the Irrigation Department. The area under plantations increased from 25,542 to 26,948 acres. During the triennium 3,161 acres were successfully planted and 1,272 acres failed as compared with 2,240 acres successfully planted and 712 acres failed in the previous triennium. About half of the failures occurred on the Upper Jhelum Canal and were due chiefly to poor soil and insufficient rainfall. The area under nurseries has decreased from 75 to 28 acres owing to transfers to plantations.

The income during the triennial period amounted to Rs. 4,21,000 as compared to Rs. 3,81,000 in the previous triennium and the expenditure to Rs. 9,41,000 as compared with Rs. 7,86,000.

Arboriculture in Provincial Divisions (Public Works Department).

158. The length of roads and canals suitable for avenues is now 945 miles as compared with 920 miles in the previous triennium and the length actually planted is 800 as against 753 miles. One hundred and thirty-two miles were successfully planted during the triennium and failures amounted to 14 miles, the corresponding figures during the previous three years being 81 and 11 miles. The area under groves has slightly decreased and now stands at 638 acres, that under plantations has risen by 9 to 35 acres and that under nurseries has decreased from 31 to 15 acres mainly owing to transfers to groves.

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The revenue of the period amounted to Rs. 85,000 and the expenditure to Rs. 1,26,000 as against a revenue of Rs. 92,000 and an expenditure of Rs. 97,000 in the previous triennium. The increase in expenditure is mainly due to a rise of Rs. 8,700 in Rawalpindi Division on account of establishment and a rise of Rs. 10,000 in Ambála Division on account of new plantation work undertaken.

General.

159. The following table shows in a concise form extensions and failures which have taken place in the avenues, groves and plantations under all kinds of management during the period under report as compared with the previous triennium :—

	1911-12 to 1913-14.		1908-09 to 1910-11.	
	Planted.	Failed.	Planted.	Failed.
Avenues (miles)	2,200·98	421·47	1,829·58	476·63
Groves (acres)	31·73	35·96	43·45	16·00
Plantations (acres)	3,186·59	1,288·19	2,280·20	714·05

On the whole the triennium must be considered to have given satisfactory results, especially as the charge for establishment has decreased by Rs. 7,571. There is a strong tendency to replace the old establishment by properly trained men, and it is probably to this that increase in the amount of work done is attributable.

31.—Mines and quarries.

160. There are 8 coal mines in the Punjab, which come within the scope of the Indian Mines Act, 6 of them being in Jhelum, from which the output was over 46,000 tons, and 2 in Shahpur from which the output was nearly 5,000 tons. From the 4 Government salt mines in the salt range 138,540 tons of salt were taken. There are 5 slate quarries in Kángra and 4 in Gurgaon from which nearly 9,000 tons of slate were taken and from one limestone quarry in Hoshiárpur the output was 900 tons. No other mines in the Punjab come within the scope of the Indian Mines Act.

32.—Manufactures.

161. The number of factories in the Punjab rose from 222 in 1912 to 224 in 1913, and the average daily number of employés from 30,557 to 31,709 ; the figures for female and child workers were 3,864 and 792, respectively, compared with 3,564 and 703 in the previous year. In ginning factories—by far the most numerous class—male unskilled labour commands from 8 to 12 annas a day and female labour about half the amount. Considerable improvement is possible in the conditions in which the employés work : sanitation and ventilation in general leave much to be desired and a stricter observance is required of the provisions of the Factories Act, with regard to hours of employment. Convictions were obtained in the two cases brought during the year for breaches of the law in this respect : and instructions have been issued to institute prosecutions whenever there is clear proof of an important or continued disregard of the regulations governing the employment of factory labour. The number

of accidents fell from 262 to 231; but the decline was accompanied by an increase of 6 in the number of fatal, and of 13 in the number of serious accidents, and a considerable proportion were due to the inadequate fencing of machinery, and must therefore be considered to have been preventable. In this and other respects it is hoped that an improvement will follow the appointment of an expert Inspector of Factories who arrived from England in November 1913. He will be in a position to exercise a stricter and more efficient supervision than could be given by the District Magistrates and Civil Surgeons who were previously in charge of the duties of inspection, and his appointment should secure uniformity and continunity of policy in carrying out the provisions of the Factories Act. Under the new arrangements, District Magistrates continue to be *ex-officio* Inspectors in their own districts, but they no longer carry out periodical inspections: the duties of Civil Surgeons are confined to certifying children before they are given employment in factories.

33.—Trade.

Internal rail and river borne trade.

162. The total value of the exports of merchandise from the Punjab in 1913-14 exceeded that of the imports by more than 2½ crores, and there was in consequence a large net import of treasure, chiefly of gold coin and bullion from Bombay. Imports of foreign piece-goods into the Punjab were stimulated by a fall in the price of European cottons, and rose by 116 lakhs: there were also heavy demands for marble, stone and metals in connection with the construction of Imperial Delhi, and of bridges over the Sutlej, Beas and Ravi, while scarcity of fodder at the end of the year in the south-east of the province led to an increase of over 20 lakhs in the value of imported cotton seed. But in spite of these increases, imports as a whole fell off slightly. A good cane crop lessened the demand for foreign sugar, and fewer gunny bags were required owing to a decline in wheat exports: these fell in value by 93 lakhs. The price in India was slightly higher than in the previous year, and the European demand for Indian wheat slackened owing to good harvests in the United States, Canada and Australia. The export of barley also declined owing to an abundant English crop. But these decreases were counteracted by large additional exports of gram, pulse, jowar and bajra to the famine-stricken areas of the United Provinces, and by increases in the exports of raw cotton, oilseeds and rice, due to good harvests. The value of the total exports of the Punjab was 209 lakhs in excess of that of the preceding year.

The growing popularity of a gold coinage is shown by the statistics relating to treasure. The stock of gold coin and bullion in the Punjab was increased by nearly 4½ crores in the course of the year: nearly two crores of rupees left the Province.

Trade with trans-frontier countries.

163. Owing to changes in the location of registration posts, a comparison with the trade statistics of the preceding year would be misleading, except in the case of Afghanistan. In 1913-14 the balance of trade set in favour of the Punjab: exclusive of treasure, the recorded exports amounted in value to Rs. 18,38,000 and the imports to Rs. 15,79,000. This result was mainly due to the transactions with Central Asia, which took manufactured silk and cotton and woollen piece-goods to the value of Rs. 11,53,000, skins and maunfactured leather worth Rs. 1,72,000 and a considerable quantity of Indian tea and spices. These commodities were paid for in part by the export of large quantities of raw silk, wool and charas: but

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the total imports of merchandise into Central Asia exceeded the exports by Rs. 6,41,000, of which a lakh and a half was liquidated in gold, and nearly half a lakh in silver. Afghanistan also imported more than it exported, but the value of the direct trade in either direction did not reach one lakh. The export of hides and raw wool is said to have been prohibited by His Majesty the Amir to protect factories lately established in his territories, and if the report is true, this measure may account for the considerable decline which took place in the value of manufactured leather, and piece-goods sent to Afghanistan. It is possible, however, that the difference is due to exports by rail *viâ* Quetta and Chaman, which are not shown in the Punjab returns. Trade with Chinese Tibet was practically confined to the import of wool which was valued at Rs. 3,86,000 in 1913-14: exports to this country were insignificant, and apart from the sale of small quantities of grain, rice and piece-goods, the indebtedness of the Punjab appears to have been met to some extent in bullion.

Joint Stock Companies.

164. The Punjab was visited during the year by a severe commercial crisis, in the course of which 69 companies, including 10 out of 22 companies newly registered, went into liquidation or for other reasons ceased to work: at the end of the year there were only 108 registered companies working, as compared with 155 in March 1913. The most serious failures were those of banking companies. Unsound methods of investment, and in particular the failure to keep a sufficient proportion of assets in liquid form led to a collapse which was very widespread in the case of Indian banks, and 21 institutions, with paid-up capital of about 25 lakhs, and deposits amounting according to their latest balance sheets to about $2\frac{1}{2}$ crores, were compelled to close their doors. Their failure was accompanied by the downfall of many insurance and trading companies, which had relied on the banks to finance their operations, and were in some cases under the same management. Apart from the actual loss to depositors and other persons immediately interested in the concerns, the crisis inevitably resulted in a contraction of credit, which did much harm to the trade of the province. It is to be hoped that it will clear the ground for the uprising of a better and more stable banking system.

Increasing indifference on the part of those responsible for the direction of companies with regard to the punctual filing of important documents, and even to holding a general meeting made it necessary to institute a larger number of prosecutions under the Companies Act during the year.

34.—Buildings and Roads.

General.

165. The prosperous state of the provincial finances during the last year is clearly reflected in the report on the working of the Public Works Department, which is the chief spending department of the administration. The Punjab is now after many years in a position to meet the pressing demands for more and better Government buildings, and for improvement in communications incidental to a rapidly progressing province. The expenditure in the Buildings and Roads Branch of the Public Works Department amounted during the year 1913-14 to Rs. 91,60,282, the highest figure yet attained. In the two previous years the expenditure stood at Rs. 70,21,581 in 1911-12, and Rs. 79,70,169 in 1912-13. Most of the increase has been under the head of Civil Buildings, but there have also been increases under all heads of Provincial Works. At the same time the establishment charges have remained practically constant for the last 8 years. The result has been that the proportion of the cost of establishment to that of works has been reduced from 30·95 in 1909-10 to 13·27 in 1913-14. This decrease in establishment charges is satisfactory and

shows that when sufficient funds are forthcoming to meet the growing requirements of the Province and to utilize to the full the establishment available, the agency of the Public Works Department is not an expensive one. The lowest limit in the percentage of cost of the executive establishment of the department has, however, probably now been reached. The Provincial expenditure during the year amounted to Rs. 73,32,886, but there was a large lapse (Rs. 19,64,114) on the budget grant. Instructions have been issued for the exclusion from the budget in future of provision for schemes which have not been fully worked out, and it is hoped that in consequence future budget grants will be more fully and more economically utilized.

Many buildings have been erected for the Police and Educational Departments during the year. In the case of the Police Department, accommodation has been provided for a large number of the staff, both European and Indian. In the Education Department large schemes for the construction of high schools, normal schools, and boarding houses have been taken in hand in order to keep pace with the expansion of the department.

In the past year a considerable advance has also been made in improving the main line of road communications in the Province, which is partly due to the stimulus provided by the increased motor traffic. Three of the main rivers of the Punjab will shortly be spanned by permanent road-bridges. A new bridge is in course of construction over the Ravi at Lahore, and the old abandoned railway bridges over the Beas and Sutlej have been converted into road bridges.

The question of a more extensive use of stone metal, to replace kankar for the surfacing of the roads, is engaging the attention of the engineers. Kankar quarries are giving out in various districts in the neighbourhood of main roads, and the kankar obtained is of too inferior a quality to stand the wear and tear of modern traffic.

Sanitary work is assuming an ever-growing importance, and water-supply and dranage schemes have been undertaken in a number of towns.

A consulting architect has now been appointed for the Province.

166. The chief work completed during the year was the Imperial Legislative Council chamber at Simla, which has cost more than 4 lakhs. This building forms an extended wing of Viceregal Lodge and is handsomely designed and finished. **Imperial Works.**

The only other work of much importance was the provision of a combined gravitation water-supply for the cantonment and civil stations of Upper Dharmsala.

167. The Simla Hydro-Electric scheme, which was begun in 1908, has now been completed. It serves the dual purposes of supplying light and energy to Simla and also of supplying energy to pump water in order to augment the present supply. The total cost of this scheme has been 13½ lakhs and an additional 5½ lakhs has been spent on the extension of the water-works. The plant was maintained for nine months by the Public Works Department and then handed over to the Simla Municipality. **Provincial Works.**

The Dane Dam at Nammal in the Mianwali District which has now been completed, is the first large masonary dam constructed by the Punjab Public Works Department, and is a new feature in irrigation. It has been built across the rocky gorge of a stream and will irrigate an area of about 18,000 acres. The canal was opened in December 1913, and so the financial results are not yet apparent, but the people in the neighbourhood of

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Mianwali will certainly benefit from the new water-supply. Another very interesting development in Public Works is the Grain Elevator at Lyallpur, which is the first attempt made at handling and storing grain by modern methods on a large scale in the Punjab. It is hoped that it will prove the first step in bringing the great export trade of Indian wheat into line with the up-to-date systems prevailing in Canada and the Argentine. The elevator has not yet been completed. The work of converting the District Jail, Lahore, into a Borstal Central Jail was completed during the year, the total expenditure incurred being 5¼ lakhs.

34 A.—Railway and Tramways.

168. On the North-Western Railway the open mileage is now 5,178 miles and 273 miles are under construction or sanctioned for construction. The total capital outlay up to 1913-14 amounts to 9,06,563 thousands of rupees, and the net earnings were approximately 4¼ crores, the percentage of net earnings on total capital outlay being 4·68; on the Commercial Section of the line the above percentage was 5·88 and on the Military Section was 0·02.

During the year the Jullundur-Hoshiarpur Branch was opened throughout its length. It traverses a rich part of the Punjab and connects Hoshiarpur, one of the very few district head-quarters in the Punjab not already provided with railway communication, with the main line. The earnings received since the line was opened indicate that the undertaking will prove highly remunerative, and have encouraged the promotion of a company for the construction of other branches in the neighbourhood. Hoshiárpur does considerable business with the Kángra Valley and this traffic has been attracted to the Railway. Among other schemes under consideration may be mentioned those for the provision of better railway facilities to meet the growing needs of the Punjab Colonies.

The Kálka-Simla Railway have started a limited service of rail motors between Kálka and Simla, which diminishes the duration and the inconvenience of that journey.

During the period under review it has been decided that all Local Governments, who may wish to do so may legislate for the levy of a small special railway cess by the District Boards; by this means, it is hoped, that much encouragement may be given to the construction of local feeder railways at the cost of Local Funds.

The net earnings of the Jagadhri Light Railway were Rs. 3,423, which gives a percentage of nearly 3 per cent. on the total capital outlay. This line is worked by a Limited Liability Company, the shares in which are held locally.

35.—Irrigation.

General.

169. The direct receipts and expenditure of the Irrigation Department during the year were Rs. 2,56,62,835 and Rs. 1,96,78,459, respectively, as against Rs. 2,28,97,431 and Rs. 2,29,78,853, the average of the previous triennium. The expenditure was practically divided evenly between the capital and working expenses. In addition to the direct receipts, the indirect revenue credited to the canals on account of the enhanced land revenue, etc., amounted to Rs. 110¼ lakhs—a considerable increase on the average credit on this account for the three previous years.

The following statement shows the year's financial results on canals in operation classed as Productive Major Works, and

the area irrigated by each; the indirect revenue is included in column 2 :—

1	2	3		4
Name of Canal.	Net profit after including interest charges.	Percentage of profit on capital outlay.		Area irrigated.
		(a) including interest charges.	(b) excluding interest charges.	
	Rs.			
Western Jumna Canal (including Sirsa Branch).	16,02,800	9·10	12·32	779,139
Sirhind Canal	20,60,050	8·11	11·33	1,357,928
Upper Bari Doab Canal ...	26,58,604	12·39	15·65	1,120,137
Lower Bari Doab Canal ...	—6,32,464	—3·38	—0·24	73,578
Upper Chenab Canal	—8,52,048	—2·70	0·49	164,110
Lower Chenab Canal	1,21,22,566	38·86	42·15	2,245,598
Lower Jhelum Canal	27,96,491	17·51	20·82	823,532
Upper Sutlej Canal	3,34,072	18·56	22·75	287,290
Sidhnai Canal	3,79,574	28·50	31·80	254,705
Indus Canals	32,240	1·14	4·41	245,704
Total ...	2,05,01,885	12·22	15·45	7,351,721

The corresponding total amount of net profit on these Major Works in 1912-13 was Rs. 1,92,08,877, and in 1911-12 was Rs. 1,49,70,907, and the average irrigated area of these canals in the triennium ending 1912-13 was 7,144,660 acres, so there has been an increase both in the area irrigated and in revenue.

170. The revenue was nearly 5 lakhs higher than the previous maximum receipts in any one year. The gross revenue collected was more than 9 lakhs above the average of the previous triennium, this increase being due to the increase in the area irrigated in the year 1913. The canal was in flow throughout the year and no closure could be resorted to owing to the deficiency of rain. **Western Jumna Canal.**

The area thrown out of cultivation by swamping along the lower reaches of the Main Line is being gradually improved by costly silting reaches, which are being formed to protect it. The benefit to the land alongside the upper reaches of the Main Line is enormous and enables several thousand acres of sugarcane to be grown on percolation water from the canal, for which no water rate is charged. A fourth division has been created for this canal which should add greatly to the efficiency of the work, as all the divisions were too unwieldy to be efficiently controlled.

171. With regard to irrigation, the year was, on the whole, favourable. There was an increase of 21·74 per cent. in the area irrigated in the autumn and a decrease of 4·52 per cent. in the area irrigated in the spring crop and the total irrigation for the whole year was greater than the average of the triennium ending 1912-13 and very nearly one and a half times as much as the average of the triennium ending 1909-10. **Sirhind Canal.**

Compared with the year 1912-13 there was a decrease in the total area irrigated of 118,854 acres in British and Native States. This decrease was mainly due to rainfall not being so favourable for spring sowings as it was in the previous year. The canal was in flow for 165 days during

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autumn and during spring for 182 days or for 347 days in all. No general closure was possible on account of the very scanty early winter rainfall.

The agricultural conditions were generally favourable. There were no calamities and crops were good. The river supply in the spring was considerably short of requirements and for some days in February only sufficed to give full supply to the Native States Branches, the combined Branch being entirely closed off.

Upper Bari Doab Canal.

172. Compared with the year 1912-13, the area irrigated shows a decrease of 50,579 acres, due to the absence of rain at the time of sowing the spring crops. The area irrigated in kharif (569,568 acres) was, however, the largest ever recorded, the previous kharif maximum being 552,032 acres in 1912-13.

The year, on the whole, was a prosperous one from an irrigation point of view. The tract served by the new 4th Division has had its facilities for water-supply much improved. Considerable improvements to distributaries in the way of remodelling Head Regulators and Head Reaches, etc., were made. The canal branches in the Division were also remodelled in several reaches and the work is still in progress. In the 2nd and 3rd Divisions difficulty is being experienced in effecting an equitable distribution of water. The tail villages of some distributaries do not get a proportionate share owing to villages in the upper reaches taking excessive amounts. The remodelling of distributaries and the opening out of natural drainages since 1908 are having an appreciable effect in rapidly disposing of surface water after heavy rainfall and hence in checking water-logging.

Lower Chenab Canal.

173. The autumn crop, though showing an improvement on the two previous triennia, was hampered by the absence of rain in the months of April and May. The bulk of rainfall fell in June, July and August and totalled somewhat in excess of the normal for this part of the year.

The spring crop was ushered in with good promise, as the late rains had helped extensive sowings, but the season proved extremely disappointing. There was no more rain till late in February and March, and standing crops were matured with the utmost difficulty. Notwithstanding these drawbacks the crop was not far short of the average of the last triennia. The total irrigated area was normal.

A heavy decrease of Rs. 1,46,874 in the assessment of owners' rates on this canal is due to the abolition of these rates in the villages recently reassessed. The assessment of land revenue, the rates for which were enhanced when owners' rates were abolished, shows a corresponding increase.

The rise of spring levels in certain areas and the approach of water-logging is receiving special attention, and it is anticipated that the programme of restriction of supply in such areas outlined by the Chief Engineer, together with the improvement of natural drainages of the country now being undertaken, will afford material relief and tend to progressive improvement.

Lower Jhelum Canal.

174. Hailstones and blight caused damage to wheat and gram crops in certain parts of the circle, and consequently remissions on those crops were granted on 5,820 acres. The season was, otherwise, a favourable one, the rainfall being better than in the previous two years.

The supply in the canal was sufficient and no rotational closures had to be enforced. It was closed at head for 29 days during autumn and for 33 days during spring. The irrigated area was somewhat greater than in 1913.

Upper Chenab Canal.

175. A general description of the scope of the project was given in the report for the year 1911-12. The canal was opened in April 1912, but

it cannot be worked to full advantage until the completion of the Upper Jhelum renders the surplus water of the Chenab river available for the Lower Chenab Canal. The Upper Jhelum Canal will not be opened till 1915, and this canal will, therefore, continue to work at a disadvantage for one year more.

Good progress was made during the year on the construction of distributaries, and only a few comparatively small works remained to be carried out. The canal remained open from April to 14th October 1913 when the entire river supply was required for the Lower Chenab Canal. Compared with the project forecast for the year the area irrigated showed a falling-off of 35,890 acres. If, however, the figures for the two years (1912-13 and 1913-14) are taken together the area irrigated (280,272 acres) was well in excess of the forecast for those years, *viz.*, 240,000 acres.

The gross receipts (direct and indirect) amounted to Rs. 5,59,269 and the working expenses to Rs. 4,03,077, showing a net revenue of Rs. 1,56,192 or 0·49 per cent. on the capital outlay (excluding interest charges) to end of the year. This result is very satisfactory, as a net revenue of Rs. 92,000 only was anticipated in the project forecast for the second year after opening of the canal.

Lower Bari Doab Canal.

176. A brief description of this canal was given in the report for 1911-12. All the necessary works pertaining to the level-crossing having been completed the canal was formally opened by His Honour the Lieutenant-Governor of the Punjab on the 12th April 1913.

The excavation of the Main Line and all masonry works thereon, with the exception of the reinforced concrete syphon just above the level crossing, were completed last year. This syphon was completed during the year under report.

In order to utilize the summer flood water of the Ravi during the year the construction of water-courses on certain completed distributaries and their minors was pushed through with great vigour; 3,307 miles out of a sanctioned length of 3,846 miles being completed during the year.

On the whole the result of the first year's working was highly satisfactory, the actual area irrigated being considerably more than was expected. The canal is not yet working at a profit.

Upper Sutlej, Sidhnai and Indus Inundation Canals.

177. On the Upper Sutlej Inundation Canals and the Sidhnai Canal irrigation was normal, while on the Indus Inundation Canals a decrease occurred owing to the early closing of the canals in spring through the fall in the river's level.

Upper Jhelum Canal.

178. This canal is still under construction. It was expected that the work would be sufficiently advanced to enable the canal to be opened for spring irrigation at the end of 1914, but unfortunately the river bund breached and extensive flooding took place, which has caused a set-back of some months; otherwise satisfactory progress has been made and the excavation of the Main Line is finished, while the making of distributaries is going on well. Some trouble has been experienced in procuring labour which is becoming more and more expensive. This has been specially noticeable of late with the Mangla Regulator, where the progress is likely to be delayed by the scarcity of masons and suitable labour.

Minor Irrigation Works.

179. On the Shahpur inundation canals the season was favourable. The demand was keen and the supply in the canals adequate. The area irrigated and the revenue realized were both well above the average for the previous triennium.

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The area irrigated by the Ghaggar canals is very irregular; this year it was 19,560 acres and the canals as usual worked at a loss as no share of the indirect revenue from them (in fluctuating land revenue) is credited to the Canal Department unless it exceeds 37,000 rupees which it never does.

The Lower Sutlej, Chenab and the Muzaffargarh Inundation canals show an increase in the area irrigated, the area matured, and net revenue as compared with the averages of the previous triennium. The area irrigated from, and the revenue of, the Ravi Inundation Canals increased considerably, the net revenue being Rs. 8,180 against a loss of Rs. 14,108 in the previous year. This is due to the Deg Canal having run for a longer period than in the previous years, as its supply was supplemented by the escapage from the Upper Chenab Canal.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1913.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1913-14.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1913-14.

Stamps.—Note on the Stamp Statements of the Punjab for the year 1913-14.

Income-Tax.—Report on the Income-Tax Administration of the Punjab during the year 1913-14.

Forests.—Progress Report of Forest Administration in the Punjab for 1913-14.

Provincial Revenues.—Budget for 1914-15 and Financial Statement, published in the *Punjab Gazette.*

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1913-14.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1913-14.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part III—Commercial Services.

Part IV (*b*)—Finance and Revenue.

Part VIII—Local Funds.

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1913-14.

36.—Gross Revenue and Expenditure.

180. The Administration Report of 1911-12, paragraph 495, gives a description of the method of calculating the gross revenue raised in the Province and controlled by the Local Government, and the shares due to Imperial and Provincial Governments, respectively. The following table shows the receipts under the various heads of revenue in the year under report :— Gross revenue.

Major heads.	Imperial. Rs. 1,000.	Provincial. Rs. 1,000.	Total. Rs. 1,000.	+ or − on figures for 1912-13. Rs. 1,000.
Land Revenue	1,05,61	1,63,83	2,69,44	− 24,03
Opium	6,52	...	6,52	+ 55
Salt	38,41	...	38,41	+ 6
Stamps	28,12	28,12	56,24	+ 1,01
Excise	34,57	34,57	69,14	− 98
Assessed Taxes	8,60	8,60	17,20	+ 30
Forest	...	13,55	13,55	+ 1,16
Registration	...	3,78	3,78	+ 26
Tribute	1,45	...	1,45	+ 3
Interest	41	2,34	2,75	− 28
Law and Justice—Courts of Law ...	...	5,54	5,54	+ 66
Do. —Jails	...	3,94	3,94	+ 69
Police	...	2,04	2,04	+ 5
Receipts in aid of superannuation ...	1,07	75	1,82	− 18
Agriculture	...	2,18	2,18	+ 21
Education	...	4,49	4,49	+ 11
Miscellaneous	39	6,35	6,74	− 3,74
Irrigation—Major Works	1,73,79	1,73,79	3,47,58	+ 19,38
Do. —Minor Works	9,03	76	9,79	+ 1,13
Civil Works	94	5,22	6,16	+ 26
All other heads	80	1,58	2,38	− 1,26
Total ...	4,09,71	4,61,43	8,71,14	− 4,61

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Gross expenditure.

181. The expenditure during the year, excluding expenditure of the Military, Railway, Post Office and Telegraph Departments and capital expenditure on canals, was as follows :—

Major heads.	Imperial. Rs. 1,000.	Provincial. Rs. 1,000.	Total. Rs. 1,000.	± on figures for 1912-13. Rs. 1,000.
Land Revenue	...	49,10	49,10	+ 1,37
Salt	5,40	...	5,40	+ 18
Forests	...	9,19	9,19	+ 1,20
Registration	...	1,20	1,20	+ 02
Interest	1,10	1,74	2,84	— 09
General Administration	4,67	12,21	16,88	— 33
Law and Justice—Courts of Law ...	...	42,55	42,55	+ 37
Do. —Jails	...	14,27	14,27	+ 1,12
Police	...	58,93	58,93	+ 39
Education	...	44,69	44,69	+ 10,22
Eccleasiastical	2,45	...	2,45	...
Medical	...	13,72	13,72	—12,10
Political	6,93	...	6,93	+ 40
Scientific	1,36	9,66	11,02	+ 30
Superannuation	4	21,73	21,77	+ 2,15
Stationery	27	6,67	6,94	...
33—Famine Relief	1,62	...	1,62	+ 1,41
Reduction or Avoidance of debt ...	...	1,40	1,40	...
Irrigation—Major Works	74,40	74,39	1,48,79	+ 2,80
Do. —Minor Works	9,39	2,84	12,23	— 93
Civil Works	6,48	96,95	1,03,43	+ 30,17
All other items	5,14	7,11	12,25	— 1,54
Total ...	1,19,25	4,68,35	5,87,60	+ 37,11

37.—Land Revenue.

182. As explained in paragraph 497 of the Administration Report for 1911-12, the land revenue as given in the Land Revenue Report concerns the agricultural year ending 30th September, six months preceding the end of the financial year, so there must always be a difference in the total collections as calculated by the Treasury and by the Financial Commissioners' office in their yearly returns.

The Land Revenue Report for the year ending 30th September 1913 returns the following figures, including collections on account of previous years, comments on which have already been made in Section 10:—

	Rs.
Fixed Land Revenue	2,09,49,339
Fluctuating Land Revenue	1,09,94,111
Temporarily excluded from Fixed Land Revenue Roll.	2,52,164
Other Land Revenue	52,08,656
Total ...	3,74,04,270

or, after deducting Rs. 86,23,424 due to irrigation, Rs. 2,87,80,846.

38.—Irrigation.

183. The total capital invested up to the end of 1913-14 on canals in operation classed as Productive Major Works was over 16¾ crores; the capital expenditure during the year was approximately 48¾ lakhs; the income from all sources after deducting refunds approached 3½ crores; the working expenses amounted to over 88 lakhs; and the interest charges to 54½ lakhs.

184. This leaves a net profit of 205 lakhs as compared with 192 in 1912-13 and 149¾ in 1911-12.

The balance profit on Imperial Canals, Minor Works not classed as Productive, was 9 lakhs, and of Provincial Canals was Rs. 35,000, both results being improvements on previous years.

39.—Excise and Opium.

General.

185. The principal event in the excise administration of the year has been the passing of the new Punjab Excise Act which came into effect on the 1st February 1914. This Act will greatly strengthen the hands of the excise authorities, especially by means of the enhanced penalties which it provides for various offences. The effect of the Act could hardly be apparent in the year under review; but the more stringent provisions of the new law should lead to a material reduction in drunkenness and in illicit distillation.

The total revenue brought to account in 1913-14 was Rs. 69,08,660 as compared with Rs. 70,12,432 in the previous year. But the latter figure included 6 months' collections at Delhi, and it was also swollen by the crediting in 1912-13 of large sums which had been placed in deposit in 1911-12. The actual increase of revenue in the year under review may be taken at about Rs. 4,91,000. This increase has occurred mainly in the receipts from country spirits—both in still-head duty and vend fees, and from sales of excise opium.

Liquor.

186. The policy of reducing the number of retail licenses for the sale of country spirits has been steadily pursued, and the total of such licenses fell from 783 to 766 during the year. It appears however that a point has now been reached where a further decrease of shops merely sends the trade to the remaining shops or to the illicit-still. This view is borne out by the fact that the present reduction of shops has been accompanied by an increased consumption of about 13,000 gallons of country spirit, though the amount of this spirit consumed in the Province is not excessive as compared with the rest of India.

As was the case in the United Kingdom a generation ago, an increase in the prosperity of the people appears to lead to increased expenditure on drink. This tendency has in recent years been combated in the United Kingdom by the spread of more enlightened ideas and by the facilities given for more innocent forms of recreation, a field which offers scope for the energies of temperance and other social societies. Government is ready to assist well-organized efforts of this description. In this connection, the temperance movement is reported as having had some effect in Jhang, Lyallpur, Shahpur, Gujrat and Ferozepore, though in Amritsar, a stronghold of the movement, consumption of liquor does not appear to have decreased. Advisory committees have also been appointed in some of the larger towns with a view to associating men of influence with the regulation of the liquor traffic. A further movement, indicating increased interest on the part of the public in the suppression of excessive drinking, is the formation of Panchayats in the Gurdaspur District which has already been referred to in the section on Criminal Justice. The great difficulty of providing a counter-attraction to drink, however, still remains unsolved.

The increase in the income from licenses for the sale of foreign liquor has been accompanied by an all-round decrease in the consumption. The special or spiced spirit made in the Punjab distilleries appears to be gradually ousting the imported article, and a suggestion has, therefore, been made to tax this form of spirit at the same rate as the foreign liquor but, as control can be exercised over the operation of Punjab distilleries, while deleterious foreign liquors can be imported without any check except the customs duty, and as the substitution of the home made for the imported liquor is not a matter of regret, this suggestion has not met with approval. The advocates of higher taxation on spiced spirit would be on stronger ground if they could show that the manufacture of this class of liquor increases the total consumption, but this has not yet been proved.

The numbers convicted for drunkenness in the Municipal towns of the Punjab were 1,388 as against 1,301 last year.

Opium.

187. The total consumption of opium of all kinds is practically stationary; the increased sale of hill opium is due mainly to its being now cheaper than the excise opium, although the latter is of a superior quality. The question of raising the price of excise opium still higher is under consideration, and when this measure is carried out it will be necessary to enhance the rates of duty on the other classes of opium consumed in the Punjab. The largest increase in consumption in any district is in Ferozepore, where it is reported that $\frac{3}{5}$ths of the licenses are in the hands of small shop-keepers who have taken them in order to push their other business. Measures may have to be taken to put a stop to this combination of trades.

The profits on the sale of excise opium brought to account during the year were Rs. 6,29,632, an increase of Rs. 88,071, which is the result of the rise of the issue prices from Rs. 18 to Rs. 20 from 1st April 1913, issues having decreased by 1,363 seers.

Hemp drugs and cocaine.

Charas. 188. The charas warehouses in the province were closed in October 1912 with the exception of those at Hoshiárpur, Sultánpur, and Ráwalpindi; but in view of the dislocation of other trade by this measure, the Amritsar warehouse was reopened in November 1913. The consumption of charas has sunk from 23,628 (excluding Delhi) to 21,789 seers, which is due at least partly to the increase of duty causing a rise in prices. The duty, which was raised to Rs. 11 in 1911, was again raised to Rs. 12 per seer in April 1913, and opinions are practically universal in favour of a further enhancement.

Bhang. 189. There are signs that the consumption of this drug is, if anything, on the increase, and the Financial Commissioner has been asked to consider whether any measures can be devised to check it. Not only have the reported sales gone up, but the seeds of the hemp plant are brought down by the canals, and it bids fair to be of spontaneous growth throughout a good part of the Province.

Cocaine. 190. Cocaine licenses decreased by 3 and sales to the public from 22,958 to 15,074 grains, but the prevalence of illicit trade is known. The cocaine habit is so far not suspected outside of the Ambála Division and in the towns of Lahore and Amritsar, but it is to be feared that it is advancing, and it constitutes a worse menace to health and morals than any other intoxicant in use in the Punjab.

Excise offences and preventive measures.

191. The number of persons arrested for excise offences rose from 719 to 871 and that of persons convicted from 525 to 653. This appears to

show increased activity on the part of the Excise staff, a conclusion supported by the rise in the percentage of convictions from 73 to 75. There were no arrests for smuggling of cocaine, though this is known to exist, the small bulk of the drug and the absence of any characteristic odour rendering detection extremely difficult. Attention is being paid to the improvement of the prosecuting agency, as it has been found that acquittals often result from courts not having the law or the facts properly placed before them. The annual report on excise officers will in future include remarks on their capabilities in this respect and a qualifying examination in law will be passed before any officer is confirmed in the department. Various executive measures may also help such as the more liberal distribution of rewards or the expedient adopted in Lyallpur where all lambardars, in whose villages illicit distillation has been discovered otherwise than on information given by them, have been systematically dismissed.

The Excise Information Bureau has become a permanent institution since July 1913, and the Bureau is reported to have done very good work in co-ordinating and circulating information likely to lead to the detection of offences and also in actual detection. Smugglers are closely watched by the excise officers, and their departures from one station to another or to another Province are communicated through the Bureau to the proper authorities.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

191. The quantity of salt excavated during the year was 3,793,480 maunds, which is an increase of 3·87 per cent. on last year's figure. The issues of over 38 lakhs of maunds were also 1 per cent. more than last year and the sales amounted to over 35 lakhs of maunds, an increase of a quarter per cent. The price of 1 anna 2 pies a maund remained unchanged throughout the year, and there was a net loss on working of three thousand rupees as compared with a profit of Rs. 2,937 in 1912-13, this being due to a slight increase of expenditure. The through traffic sales amounted to over 30½ lakhs of maunds and formed 94·47 per cent. of the total Railway borne trade of the division as compared with 94·83 per cent. in 1912-13. The through traffic collections were Rs. 47,968.

Mandi Mines.

192. The sales from the Mandi Mines were 94,357 maunds, a slight increase on the previous year.

Sultanpur Salt Works.

193. The sales continued to decrease and amounted to only 23 thousand maunds, a fall of 19 per cent. The price at which salt was sold by the manufacturers at the Sultánpur Salt Works ranged from 1 anna and 6 pies to 7 annas per maund, and the average price was 4·63 annas per maund. As the salt business at Sahidpur "Sarr" of the Sultánpur Salt Works had greatly declined and there seemed no prospect of material improvement that "Sarr" was closed in January 1914. The realizations on account of Hakimi Cess at the sanctioned rate of 3 pies per maund, amounted to Rs. 362 as against Rs. 449 in 1912-13.

Internal Branch.

194. Fees from licenses realised Rs. 4,781 this year as against Rs. 3,782 in 1912-13.

GENERAL.

195. Exclusive of the operations of the Internal branch, complete provincial figures for which are not published, the accounts for the Punjab, including excise duty, are as follows :—

Source.	*Receipts.*	*Charges.*	*Net receipts.*
	(In lakhs of rupees)		
Cis-Indus	38·05	4·46	33·59
Mandi	·12	·05	·07
Sultanpur	·235	·09	·14
Total ...	38·405	4·60	33·80

From the net receipts a sum of Rs. 80,000 has to be deducted on account of treaty payment to Bahâwalpur.

41.—Stamp Revenue.

196. The total revenue derived from receipts under the Court Fees and Stamp Acts in the territories now administered by the Punjab Government rose from Rs. 53,48,000 in 1912-13 to Rs. 56,29,000 in the year under report : and the growth which, with a few exceptions, is shared by all districts may be taken as a general indication of commercial and agricultural prosperity in 1913-14, in spite of the banking crisis. The value of judicial stamps issued to the public rose by Rs. 1,15,000; the increase followed naturally on the growth in the value of civil suits, and in particular on the enhanced valuation of land suits prescribed in the Court Fees Act, 1912. Prosperity generally results in an increase in litigation, and it is, therefore, not surprising to find evidence of the popularity of a legal career in a rise of 61 per cent. in the stamp duty on legal practitioners' licenses. The income from bills of exchange and impressed labels, the two heads specially affected by the bank failures, showed a considerable falling off in 1913-14. But, as a whole, there was an advance of Rs. 1,66,000, or 9½ per cent., in the receipts from non-judicial stamps, which may partly be attributed to the preference now shown by the money-lending classes for the execution of stamped agreements in transactions which they used to record only in their account books.

Elsewhere there is little to notice in the working of the Stamp Department during the year under review. The charges of the Department rose by Rs. 17,000 in consequence of the increase in sales, and there was a slight improvement in the number of cases in which insufficiently stamped or unstamped documents were detected by the Courts.

42.—Assessed Taxes.

197. The collections of income-tax in 1913-14 amounted to seventeen lakhs, an advance of Rs. 1,22,000 or nearly 8 per cent. The general rise in the cost of living is gradually forcing up salaries, and there was a considerable increase in the number of persons who paid income-tax as servants of Government, of local bodies, or of private corporations, while the amount obtained from this class of assessee rose by Rs. 15,000. The failure of a number of banks and firms hardly affected the tax on the profits of companies during the year under consideration, and by far the greater part of the total increase was obtained from the private persons and firms whose assessment is taken to the head—"Other sources of income." The number of assessees under this head rose by 2,068 to 25,980. Of the new assessees, 1,701 were in the classes which are taxed on incomes of less than Rs. 2,000, and these classes provide the large proportion of 43 per cent. out of the total revenue derived under part IV of the schedule. It is unlikely that this proportion adequately represents the distribution of wealth among the income-tax paying community, but owing to the difficulty of ascertaining the true income of private traders in this country,

it is ordinarily easier to add new names to the roll, than to raise an assessment which has once been imposed. In one direction action was taken in the course of the year to facilitate the work of the income-tax Collector. The North-Western Railway had previously refused to disclose the payments made to their contractors. This difficulty has now been overcome, and the information will be available in future for purposes of assessment.

The group method of assessment which was being tried in Siálkot did not prove entirely satisfactory, and was abandoned in 1913-14, except in Siálkot city. It was found to be of little assistance in determining the pitch of assessment, and the distribution of the total demand made by the panchayats was not always free from objection. It is, however, desirable to give a thorough trial to all expedients for improving assessments, and Deputy Commissioners have therefore been invited to introduce the system in any town where there is a likelihood that it will be successful. But real improvement in assessing processes must depend largely on the growth of a public spirit which will condemn the production by assessees of faulty or inaccurate accounts, and this growth can only be gradual. In the meantime, Collectors are being assisted by special assessing officers in large towns where the work of assessment is necessarily complex. An officer was employed on this duty in Amritsar during part of the year.

There was a small decline in the number of objections lodged against assessments, but more than one-third of the assessees still protest against the demands made on them, and 37 per cent. of the objections were successful.

43.—Forest Revenue.

199. The total revenue of the Forest year ending 30th June 1914 was Rs. 13·57 lakhs, a net increase of Rs. ·98 lakhs. The revenue was distributed among the major heads as follows:—

	Rs.
Major Produce including Drift	9·77 lakhs.
Minor Produce including revenue from forests not managed by Government	2·9 „
Other heads	·9 lakh

The expenditure of the year was Rs. 9·25 lakhs, a net increase of Rs. 1·16 lakhs which was mainly due to greater expenditure under the head of Conservancy and Works, and a small addition of Rs. 7,781 under Establishment owing to the appointment of an officiating Conservator for three months, and an increase in the number of Rangers employed.

The net results of the year's working are as follows:—

		Rs.
Cash surplus		4,31,779
Increase in value of live and dead stock ...		67,048
Total		4,98,827
Deduct—		
Decrease in value of stock in depôts	64,483	
Decrease in outstanding of revenue	6,242	
		70,725
Net result in favour of the year		4,28,102

REVENUE AND FINANCE.

44.—Provincial Revenues.

General.

200. The provincial shares of the revenue raised and the expenditure incurred in the Punjab during the last two years, with the opening and closing balancés in each year, are displayed in the table below :—

	1912-13.	1913-14.
	Rs. (thousands).	Rs. (thousands).
Opening balance	1,03,73	1,77,84
Income	4,35,76	4,32,32
Assignments from Imperial ...	73,78	29,11
Total ...	6,13,27	6,39,27
Expenditure	4,35,43	4,68,35
Closing balance ...	1,77,84	1,70,92

Income.

The revenue from Irrigation showed an improvement of Rs. 9,78,000 in 1913-14, mainly due to the transfer of a larger sum from the Land Revenue head ; forests brought in an additional Rs. 1,16,000, and there were increases aggregating Rs. 1,85,000 in Stamps and the two sources of receipt from Law and Justice. On the other hand, the Provincial share of Land Revenue, apart from assignments, fell by over 12 lakhs in the latter year, partly owing to the credit of a larger amount to the Irrigation Department, but mainly from a decrease in the receipts from the sale of proprietary rights in the canal colonies. Miscellaneous receipts decreased by Rs. 3,77,000 in consequence of the abolition of the contribution of 20 per cent. on the local rate, which had previously been recovered from District Boards.

Assignments.

There was a decrease in 1913-14 of nearly 26 lakhs in the assignments received from the Imperial Government for Education, and of over $7\frac{1}{2}$ lakhs in the grants for medical and sanitary purposes. The grant of 12 lakhs made in 1912-13 in aid of general provincial resources was not repeated in 1913-14. But a new recurring assignment of Rs. 2,08,000 was received in the latter year in connection with the remission of the contribution from the local rate, and the net decrease is, therefore, Rs. 44,68,000.

Expenditure.

Provincial outlay exceeded provincial revenues by Rs. 6,92,000. The principal increases over the expenditure of the previous year occurred under Land Revenue (1·36 lakhs), Forests (1·20 lakhs), Jails (1·12 lakhs), Education (10·22 lakhs), Superannuation (2·55 lakhs) and Civil Works (28·19 lakhs). Under Medical there was a decrease of 12·11 lakhs mainly due to an alteration in the classification of grants paid to local bodies for sanitary works. The total increase in expenditure was Rs. 32,92,000.

45.—Local Funds.

201. The gross income of the District Boards in the Province has again risen materially, and amounted this year to Rs. 79,39,637 as compared with Rs. 64,47,063 last year. The local rate accounts for $3\frac{1}{4}$ lakhs of this increase as a result of recent re-assessments and other changes ; the balance is almost entirely due to larger subventions from Government, especially for Education and Civil Works. Under these two heads alone the receipts have risen by nearly 10 lakhs. With effect from the 1st of April 1913 the contribution of 20 per cent. on the local rates which had up to that time been paid to Government by the Boards for certain general services, was remitted, and at the same time various smaller contributions, which had previously been made by Government

to the Boards, were resumed. The total contribution remitted by Government calculated on the local rate realized in 1912-13 would have been Rs. 4,28,000, while the aggregate contributions resumed were only Rs. 1,70,000. It was inevitable that a broad re-adjustment of this kind should be unequal in its effects and some boards have represented that they either did not materially benefit or actually lost by the transaction. It is clear, however, from the above figures that the Boards as a whole have secured considerable additions to their resources. This inequality in the incidence of this addition can be to some extent remedied by Commissioners, in whose power it is to vary the distribution of certain grants which have been placed at their disposal for the assistance of the District Boards.

Receipts under the head Education amounted to Rs. 14,21,387, an increase of nearly Rs. 4 lakhs, due chiefly to greater Government contributions and also to some extent to better receipts from fees. Expenditure has kept pace with the receipts, and rose by Rs. 3½ lakhs.

The income of the Boards under the head "Medical" fell by Rs. 20,707, owing to a falling-off in Government contributions, which was, however, partly counterbalanced by an increase in receipts from endowments. Expenditure rose slightly from Rs. 6,16,105 to Rs. 6,75,211.

Receipts under the head "Civil Works" rose from Rs. 18,01,332 to Rs. 23,94,467. The increase was chiefly due to larger contributions from Government. There was a corresponding rise in the expenditure amounting to Rs. 6,75,501. The construction and maintenance of communications account for the major portion of the expenditure, and it is satisfactory to note that nearly all Boards are becoming more fully alive to their responsibilities in this matter. The expenditure on construction rose from Rs. 2,34,978 to Rs. 3,02,232, whilst the charges for maintenance and repairs show an increase of Rs. 2,82,303.

No board has allowed its balance to fall below the prescribed minimum, and in several cases Boards have been unable to spend the grants made to them, and have closed the year with very large balances, notable among which were the balances at Lyallpur of about 4½ lakhs and of Multán, Gujránwála and Hissár, which were between 2 and 2½ lakhs.

46.—Municipal Funds.

201. The aggregate income of municipalities rose from Rs. 66,02,000 to Rs. 76,46,000, the increase being mainly due to larger contributions from Government. A number of municipal committees revised their octroi schedules during the year, and a substantial rise might therefore have been expected in the income from this source. The falling-off in receipts, however, in the Ambála, Ráwalpindi and Multán Divisions has almost counterbalanced the enhanced receipts in the other two divisions, and the total income from octroi has only risen by Rs. 62,000. Contributions by Government increased by over 6 lakhs, and amounted to Rs. 13,84,000. The most important grant was one of 9 lakhs to the Lahore Municipality for its sewage scheme. The remainder of the increase was due to other enhanced income from taxation amounting (excluding octroi) to about Rs. 20,000, an increase of Rs. 7,000 in the tax on animals and vehicles being the principal item, and to revenue derived from muncipal property and powers apart from taxation, the main items of increase being sale proceeds of land and produce of lands, etc., Rs. 85,000, and sale of water 16½ thousands; lastly, loans from Government amounted to 166½ thousand rupees more than in 1912-13. Expenditure has not quite kept pace with the receipts, but has risen by Rs. 4,93,000. The chief increase is under the head Public Works, amounting to Rs. 3,06,000, but "Water-supply" and "Public instruction" are responsible for Rs. 2,29,000 and Rs. 58,000, respectively. On the other hand, expenditure on drainage

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has fallen by Rs. 1,77,000. As much of this expenditure is of the nature of capital outlay, it is bound to vary from year to year, and too much significance should not be attached to annual fluctuations. No municipality failed to keep to the prescribed minimum balance, though several notified areas allowed their balance to fall below it. The new loans granted by Government in 1913-14 amounted to Rs. 4·38 lakhs. Lahore received 1 lakh for paving streets, Siálkot 3 lakhs for the water-supply scheme and Amritsar borrowed Rs. 38,000 for the renewal of the conservancy tram lines.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census.—Report on the Census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishan Kaul, C.I.E.

Births and Deaths.— } Report on the Sanitary Administration of the Punjab and
Sanitation.— } Proceedings of the Sanitary Board for the year 1913.

Emigration.—Census Reports as above.

Medical Relief— { Notes on the Annual Statements of the Dispensaries and Charitable Institutions of the Punjab for the year 1913.
Report of the Pasteur Institute, Kasauli, for the year 1913.
Report on the working of the Punjab Lunatic Asylum for the year 1913.

Vaccination.—Notes on Vaccination in the Punjab for the year 1913-14.

PUBLICATION OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part V, Area, Population and Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1911-12.]

48.—Births and Deaths.

202. The basis for the calculation of the rates of births and deaths per thousand of the population is the census population of 1911, but with a view to accuracy and as an illustration, some rates have been worked out from the census figures corrected and brought up to date by the vital statistics; it has thus been ascertained that the use of the census figures of 1911 alone would, in 1920, give an error of nearly 5 per thousand in the rate. This matter is under consideration. General.

The year 1913 was a healthy one, though the death-rate of 30·2 *per mille* was higher than in the exceptionally healthy year that preceded it. With the healthy conditions recently prevailing the birth-rate continues to rise, the provincial rate of 45·4 being 3·1 *per mille* in excess of the average of the previous five years. Infant mortality was higher than in 1911 and 1912, though less than in many recent years, and there is no doubt that this rate might be considerably reduced by providing that midwives should receive a sound training in maternity cases and simple hygiene. Efforts are being made to realise this object, but the success of these efforts must to a great extent await the enlightenment of the public generally and the education of the mothers themselves; at present 23 out of every 100 children born die before attaining the age of one year.

203. The total number of births in the Province was 878,241 which is the highest number recorded since 1900, and is due to the slight incidence of epidemic malaria in the autumn of 1911 and the general healthiness of 1912 and the first few months of the year under report. The rate was higher than in any other Province of India, except the Central and the United Provinces. Births.

204. Of the 583,784 deaths recorded in the Province, 304,326 were males and 279,458 females, the total death-rate *per mille* being 28·7 for males and 32 for females; the total rate of 30·2 *per mille* was slightly higher than that of any other Province, except the Central and the United Provinces. Deaths.

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The urban and rural rates were 35·65 and 29·66, showing about the same difference as those of the previous year. A comparison of the average urban and rural death-rates in the periods 1875 to 1900 and in 1909 to 1912 shows that the urban rate is descending slowly, while the rural rate shows very little diminution—a fact which suggests that sanitary improvement in urban areas is beginning to have an appreciable effect. The exact diminution of 4·5 *per mille* in towns is equivalent to a saving of about 8,000 lives annually in municipal towns.

Cholera.

205. After four years of ordinary prevalence, one to two thousand deaths annually, cholera broke out in 1913 in a rather severe epidemic form in certain parts of the Province and was the cause of 5,811 deaths. Although the disease was reported from 24 districts, it was very localized in intensity, and out of over 33 thousand villages and 128 towns, only 590 villages and 46 towns were infected, the area of the greatest intensity being some districts in the Central Punjab. The apathy of the people in taking measures to check the spread of an outbreak is still noticeable, and even information of the appearance of the disease is frequently only given after many days, by which time much harm has been done. This apathy, curiously enough, is more evident in towns than in villages, where the villagers more easily assent to preventive measures and often ask for assistance. In a large number of villages during the epidemic of 1913 an outbreak was averted or prevented by the adoption of simple measures.

Small-pox.

206. The total number of deaths from this cause amounted to 38,687 or 8,348 more than that of the year preceding; this is the largest number recorded since 1896, and is about three times the annual number of the last 20 years. The epidemic was a legacy from the previous year and continued until the hot weather. The death-rate was lower in towns than in the villages and lower in towns where vaccination is compulsory than in those where it is not; but, even in the former, the provisions of the Act are not so vigorously enforced as they might be.

Plague.

207. The plague epidemic on the other hand was extremely mild, the total number of deaths recorded in British districts being only 17,904 as compared with an average annual mortality during the previous nine years of over 180,000. Thirty-nine medical officers were, however, employed on plague duty. This staff is also being utilized for imparting general instruction on sanitary principles, and is giving ordinary medical aid, and this portion of their work is well received and is bringing them in closer touch with the people. The number of their patients (other than plague patients) was more than double what it was in 1912. The main reason for the mildness of the plague epidemic was the early and comparatively weak monsoon which led to conditions most unfavourable for flea-breeding in its various stages, and therefore a weak link in the plague chain. There is also the fact that the Plague Department nipped many an outbreak in the bud and thus also eradicated *foci*, which would have been the origin of infection in many other villages.

Fevers.

208. Fevers accounted for 331,698 deaths, a rate of 17·15 *per mille* which is greater than in the two previous years. During the five years, that have elapsed since the severe 1908 epidemic, the average annual fever mortality has been lower than in any other quinquennium during the past 30 years. This point is of some consequence, more particularly in view of the fact that public opinion is inclined to believe that malaria in the Punjab is on the increase as the result of canal irrigation. This year the work of the Punjab Malaria Bureau has for the first time been summarized in an annual report. This bureau, although not of a permanent nature, has come into existence because there is no disease in the Punjab, not excluding plague, to compare with malaria in point of prevalence and importance. It affects all races and every social grade, and the classes as well as the masses pay an annual tribute to its ravages. It is

one of the chief causes of infant mortality in this Province and its influence on the birth-rate is only less marked than on the death-rate. The report is of an *ad interim* nature and must be regarded as indicating the lines on which more comprehensive reports will be based in future; for until all the factors influencing malaria have been collected and studied over a series of years, it will not be possible to draw final conclusions in regard to any particular year.

49.—Emigration and Immigration.

210. (There is nothing to report under this heading.)

50.—Medical Relief.

Dispensaries.

Number of institutions.

211. Ninteen new dispensaries were opened and 7 closed during 1913, leaving a total of 466 open at the end of the year. In addition to these, 28 of the canal dispensaries are open to the public. The daily average of indoor patients was 2,854·58 as compared with 2,698·39 in 1912. The total number of out-patients treated was 4,505,979, an increase of about 2 per cent.

Statistics of diseases.

212. The most noticeable features in the statistics for the treatment of principal diseases are the large increase in the number of eye and ear cases and of cases of diseases of the skin and "other diseases of the digestive system," and a very marked decrease in the amount of malaria cases. The steady rise in the number of eye cases from 704,139 in 1908 to nearly 940,000 in 1913 is no doubt due to the ever-increasing confidence of the people inspired by the continued success of the skilful eye surgeons of the Province.

Surgery.

213. Operations for cataract have increased from 29,332 in 1908-10 to 41,897 in the last triennium, and nearly 94 per cent. of the operations performed in the past three years have been successful. It is not, however, by cataract cases alone that operative surgery is winning confidence. Practically in all cases of operations, except lithotrity, there has been an increase, and the number of selected operations performed rose in 1913 to the highest on record.

Finance.

214. Contributions from Government towards medical institutions have increased annually, and those from district boards also show a steady improvement. In spite of the instances of individual generosity, the normal income from subscriptions, both from Europeans and Indians, is still very meagre. The system of charging fees for treatment and medicine to patients who can afford to pay, has not met with any success except in Ferozepore, but efforts are being made to introduce it generally. The total income of the hospitals and dispensaries from all sources amounted to Rs. 13,12,926.

Medical education of females.

215. Increased attention is being given to the medical education of women and the provision of better facilities for medical aid to them. The Northern India School of Medicine has now been recognised as the provincial medical school for women and will be supported by an annual grant from Government, provided that it is managed on a non-sectarian basis, is open to women of all creeds, and that there will be no interference with religious beliefs. The managers of the school have been asked to publish a new prospectus, and it is hoped that by advertising widely over the Province the new conditions and the objects of the school, a greater number of women will be attracted, and that in a short time there will be no difficulty in supplying the ever-increasing demand for trained female medical practitioners, nurses and compounders.

Itinerating officers.

216. The extension of the duties of medical officers on plague duty to the treatment of patients of all kinds living in the villages which they

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inspect, has already been briefly alluded to. They are provided with medical panniers specially designed to meet their requirements. This system to a great extent brings medical aid to the very door of the poor patients, who live in villages situated far away from dispensaries. There were also itinerating dispensaries in operation during the year in Hissar, Karnál and Lyallpur Districts, each in charge of a Sub-Assistant Surgeon, who journeys from village to village with the medical panniers. The proper sphere of such dispensaries is in supplementing the work of the stationary institutions in times of epidemic disease and giving medical aid in areas without any stationary dispensaries.

Leper asylums.

217. The statistics of the leper asylums have recently been furnished. These institutions are nearly all managed by missionary societies. It is a matter of congratulation that the leper population is fast decreasing, and, if the present conditions continue, there will be, it is hoped, very few lepers in the Punjab in 30 years' time.

Pasteur Institute.

General.

218. During the year 1913, 3,980 persons attended the institute and underwent a course of anti-rabic treatment; whilst 402 others were advised that treatment was not considered necessary in their case as they were not exposed to any danger of infection. Amongst the number treated, 48 succumbed to hydrophobia, of whom 46 were Indians and 2 Europeans. Out of these, however, only 29 cases or ·72 per cent. are to be considered as failures of treatment, for the others died either during the course of treatment or within 15 days afterwards, which means that these cases had not reached the institute in time to receive the full benefit of the treatment. The percentage of failures in 1912 was ·56. In its capacity of Provincial Laboratory the institute reported on 1,469 specimens as compared with 1,104 in 1912.

Lunatic Asylum.

General.

219. The number of inmates in the Asylum continues to increase, and the daily average strength this year amounted to 709, the highest on record. The number of patients cured dropped to 124 as compared with 155 last year. The year, on the whole, was a healthy one, and there was a very substantial reduction in the number of the daily average sick. Cholera again appeared, but immediate and effective measures were taken, so that the disease only attacked four of the inmates. The occurrence of no less than 3 escapes, 2 murders and 1 suicide is disquieting. Special enquiries were made in these cases, and it appeared that the primary cause of the escapes was negligence on the part of the attendants, the standard of efficiency among whom is at present low. It is hoped that the appointment of a European warder and two retired non-commissioned officers of the Indian Army as warders, which has recently been sanctioned, will be effectual in preventing occurrences of this nature. Proposals are also being considered for increasing the numbers and the pay of the staff. Sanction has recently been given to considerable alterations and additions to the buildings and also to the installation of electric lights and fans. An improvement in lighting will add materially to the comfort and convenience of the inmates and will also help to prevent escapes.

51.—Sanitation.

Urban sanitation.

220. Activity in the construction of sanitary works can almost be said to be increasing by geometrical progression. This may be ascribed not only to increased interest in and desire for better things, but also to the increased possibilities due to the generous grants made by the Government of India for sanitation. The fact that grants-in-aid are made to deserving cases has encouraged municipal committees to proceed with the preparation of schemes for drainage and water-works which a few years ago would have been outside the realm of possibility; it is to be hoped now that the more important towns will rapidly attain a satisfactory sanitary

condition : this is very desirable not only for the sake of the towns themselves but because they are centres of traffic and will be important educational object-lessons in sanitation to others than the inhabitants.

The great fault to be found in all towns at present is not so much the want of good water or a good drainage system, but of the recognition of the responsibility of the individual and the proper administration of the Municipal Act. It may truly be said that the sanitary provisions of the Act are a dead letter in the majority of towns. No town can possibly be anything but insanitary, though it may have the most perfect sewage system and the best possible water-supply, unless the Act is administered and faults brought home to the individual and corrected ; such administration is one of the most potent factors in educational hygiene. The tendency at present is to pay attention to these problems which can be solved by financial assistance from the outside and to neglect those requiring internal organisation and administration, particularly conservancy and scavenging, the prevention of nuisance, the cleansing and drainage of private compounds and houses, the control of building, the regulation of the food supply and of offensive trades.

Rural sanitation.

221. The comparative healthiness of villages is a well-known fact testified every year by the considerable excess of the urban over the rural death-rate and, in consequence, the beginnings of sanitary effort are naturally directed particularly to towns ; moreover, the stirring of the sanitary conscience is more evident in towns than in villages and the townsman is becoming better educated as to his hygienic rights ; in towns, therefore, it is possible to achieve results which could not at present be attempted in villages.

The rural death-rate, however, is high, no matter for surprise to those who are cognisant of the insanitary conditions obtaining in villages generally, and the importance of reducing it has not been lost sight of. Up to the present, however, effort has been confined to encouraging the provision of good water, a considerable amount of well construction, repairing and cleansing being undertaken every year, to the keeping of village sanitary note-books, and to the giving of rewards for good sanitary condition. Neither of the last two methods, however, have met with success.

Rural sanitation has begun to attract more public attention ; it has been the subject of discussion in the Provincial Council, it was considered at the Punjab Sanitary Conference, and a Government resolution has been issued on the subject. It is proposed that a definite beginning shall be made by endeavouring to put certain selected villages in each district in as good sanitary condition as circumstances permit ; such villages will be those of particular importance from their proximity to main roads, to places where fairs are held and to important towns, such position making them particularly dangerous as reception and distributing centres for disease and also particularly appropriate as object-lessons to the people.

Expenditure by local bodies.

222. The expenditure during the year by the district boards and municipalities on sanitation was normal.

General.

223. The demands on the Sanitary Department have steadily increased, and Government has appointed a second Deputy Sanitary Commissioner and has also decided that, in addition to the cities of Lahore and Amritsar, the five towns next in importance, Multán, Ráwalpindi, Siálkot, Jullundur and Ludhiána, are to be provided with Health Officers, and that the health departments of all the more important municipalities are to be strengthened by insisting on the appointment of a certain minimum number of properly qualified Sanitary Inspectors. A six months' course of training has been arranged for, to enable the Punjab men to qualify for possible future appointments. The course is intended to be as practical as possible,

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and includes lectures and demonstrations on general hygiene, on minor sanitary engineering, and on municipal hygiene, and includes a period of actual working with the Lahore Sanitary Inspectors.

52.—Vaccination.

General.

224. The total number of operations performed by all establishments during the triennium 1911—1914 was 2,812,605, and during the preceding triennium 2,104,509. Of the increase 395,746 were primary and 312,350 revaccinations. The principal reason for the increase in primary vaccination is that early in the preceding triennium the Province suffered terribly from malaria, which enormously reduced vaccination ; a contributary factor in the increase of re-vaccination was the severe epidemic of small-pox in 1912-13 ; this factor ceased to operate in the middle of 1913 and so in 1913-14 there was a falling-off. Opposition to re-vaccination is still experienced in all parts of the Province, and epidemics seem only temporarily to overcome it. The percentage of successful operations to the total performed in which the results were known continued high, but only 78 per cent. of the children under one year of age available for vaccination in 1913-14 in the municipal towns to which the Vaccination Act applies, were successfully vaccinated. In towns, where the Act is not enforced, the percentage was 69, and it is evident that municipal authorities do not fully realise their responsibility in this connection.

The cost of the department amounted to Rs. 1,33,731 in 1913-14, an increase of Rs. 7,919 on the previous year. The work of the Vaccine Institute was satisfactory.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this Chapter will be found in the report and statistical tables noted below:—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education in the Punjab for the year 1913-14.

(2) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1914.

(3) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1913-14.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1913-14.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Part III, Educational.

53.—General system of Public Instruction.

[*Vide* pages 173—184 of the Administration Report for 1911-12.]

54.—Education.

GENERAL SUMMARY.

225. The chief features of the educational history of the year 1913-14 have been a large addition to the number of pupils and institutions, especially secondary schools; an equally marked increase in the number of teachers employed, and in the output of trained teachers; and a continuous activity in the erection and improvement of school buildings of all kinds throughout the province; while among instructional developments may be mentioned the appointment of special inspecting officers to report and advise on the teaching of science, drawing, and (in the case of girls' schools) kindergarten methods. The Mayo School of Industrial Art has been provided with large new workshops, and an additional staff of technical instructors has been sanctioned; several new industrial schools have been opened; and among buildings recently erected may be mentioned the biological laboratory of the Government College, which was almost completed by the close of the year. The Victoria School for girls, Lahore, was made a Government institution and the staff and equipment were improved.

226. The number of educational institutions in the province increased by over six hundred, and the attendance by nearly thirty-four thousand. The total expenditure on all kinds of public instruction advanced by 9 lakhs of rupees to over 93 lakhs of which more than 50 lakhs were contributed directly or indirectly by Government, *viz.*, 30½ lakhs from Provincial and 20 lakhs from Imperial funds; while the proportion of the expenditure raised from fees was 24 per cent. as last year. More than four hundred new school buildings or extensions of existing buildings were either erected or in course of erection. The percentage of school attendance of the estimated total population of school-going age has risen from 21·37 to 22·79 in the case of boys, and from 4·31 to 4·76 in that of girls. Attend-

ance is now nearly double what it was ten years ago, and the annual expenditure on education has risen by 138 per cent. within the same period.

Twelve additional posts of Assistant District Inspectors of School, were sanctioned during the year and the re-organization of the staff of Inspectresses, which now consists of a chief Inspectress and her assistant and an Inspectress for each Division, was brought into effect.

The total expenditure of the district boards on education rose from 16 to nearly 22 lakhs, out of which $10\frac{1}{2}$ lakhs were spent on maintenance of primary schools and 7 lakhs on school buildings and equipment against less than 4 lakhs in the previous year. This large increase was rendered possible by the liberal imperial grants. The total expenditure of municipal committees, on the other hand, only rose from about 4 to a little more than $4\frac{1}{2}$ lakhs, part of which new expenditure was defrayed by increased receipts from fees and by salary grants received from Provincial revenues for vernacular schools. In some cases the additional educational grants were used merely to set loose funds, formerly spent on education, for other purposes; and there is little evidence that the municipal authorities realize their duty of extending elementary education, the tendency being to assume that the local high schools will provide it.

Much activity was shown by various denominational agencies during the year in opening Anglo-Vernacular secondary schools, especially high schools, 7 of which have been opened, 3 by the Muhammadan, 1 by the Sikh, and 3 by the Hindu community.

Primary Schools.

227. A very great increase took place, as was to be expected, in primary schools. Four hundred and sixty-nine schools for boys, and 84 new primary schools for girls, were opened in the province and the number of pupils increased by no less than 27,647, of whom 22,892 were boys and 4,755 were girls, as compared with a corresponding increase of about 20,669 last year. The total number of children receiving instruction in the public primary schools in the Punjab is now well over a quarter of a million (257,000). With this large and steadily growing numerical expansion it is most satisfactory to notice a continued striving towards greater efficiency. Notwithstanding an increase of over 1,000 in the number of primary school teachers, the proportion of trained teachers to untrained shows a distinct improvement, and as the result of introduction of a more liberal scale of pay and allowances, the calling of teachers in primary schools is now becoming a popular one.

There has been a satisfactory addition to the number of agriculturists' children at school; the proportion of such children varies from 36 per cent. in the Lahore Division to 57 per cent. in Jullundur. In the latter division where the number of pupils has not risen at the same rate as in the previous year, notwithstanding a larger increase of schools, a policy has been followed of restricting numbers to reasonable limits and supplementing staff on a fixed ratio of teachers to pupils, and improving buildings of existing schools, before undertaking a marked extension of primary education. In board schools the ratio of pupils to teachers, 36 to 1 in the last quinquennium, is now 32 to 1. Internally, therefore, marked progress has already been made towards greater efficiency in board school education. Meantime the new rates of grant have combined with popular demand to encourage a large increase in the so-called indigenous type of school, many of which have improved up to grant-in-aid standard. The Ambála and Multán Inspectors also refer to the effect of the new rates of grants in increasing the number of elementary schools. "It is a hopeful sign," the Lahore Inspector says, "that all communities, Hindu, Sikh and Muhammadan, in this division have begun to open elementary schools, and local bodies are never slow to subsidise them."

228. The direct expenditure from all sources on primary schools increased by Rs. 1,73,949 to Rs. 11,79,364. There was a slight increase in fee-receipts, but virtually the whole of the extra expenditure was borne by district funds, with the aid of the new grants. It is satisfactory to find that the amount paid by the district boards in grants-in-aid to primary or elementary schools for boys rose from Rs. 64,679 to Rs. 89,623, showing that in addition to the opening of board schools private enterprise is receiving proportionate encouragement. Ten years ago the amount paid in this way was only Rs. 28,627.

A further step towards free primary education was taken during the year, by raising the authorised proportion of non-agriculturist pupils who can be exempted from fees on account of poverty to 25 per cent. of the total number. Thus in an average country school where at least half of the pupils are children of agriculturists or village *kamins* and as such exempted from payment, fees (which range from one anna to five annas per month) would be charged in the case of only a quarter of the children in attendance, so that the local contribution to the cost of the school would be trifling.

229. The new curriculum for primary schools seems to be generally approved, its distinctive features being a combination of literary training with practical instruction in certain subjects. Combined with this new course great endeavours are being made to organize the work so as to permit of shorter hours to let the boys out in time to help their parents and so meet the criticism sometimes levied that primary education tends to make an agriculturist's boy a hot-house plant, unfit and unwilling to be a farmer. In some places village school committees have been formed in order that each school should be regarded as an asset of the village, for the success of which the residents are in some measure responsible. Such committees have not done much yet, but in Amritsar they are beginning to prove of use.

Secondary Schools.

230. The number of secondary schools increased from 308 to 344 and that of the pupils in them from 92,815 to 97,570. Of the 36 newly recognized schools, 9 were High, 20 Anglo-Vernacular Middle and 7 Vernacular Middle. The activity shown by the Sikh community in starting new secondary schools has been particularly noticeable in recent years, and a similar movement by Muhammadans is now on foot. The unprecedented increase in the secondary schools which is in progress is not without its dangers unless means can be adopted to ensure that the education imparted in them is thorough and useful. Otherwise, prolongation of school life is liable to result in producing a number of half educated and undisciplined youths who cannot find employment and who have missed opportunities of being trained to avocations for which they are suited. The reality of this danger has been brought home by the unsatisfactory tendencies in the matter of conduct and discipline manifesting themselves in some institutions, more especially in the Lahore Division, and which are attributed to the dearth of strong headmasters and the want of moral calibre amongst the subordinate teachers.

Collegiate Education.

231. Including the Oriental College, the number of Arts Colleges affiliated to the Punjab University increased from 9 to 10, a college class having been opened in the Kinnaird High School for girls in Lahore, which class was attended by 6 students. The total number of students has increased by 403 to 3,176, and at the same time the examination results show a decided improvement in the percentage of successes in all except the M.A. and M.Sc. examinations in which the total number of

candidates is comparatively small. The course of lectures delivered by University lecturers from England was a most successful innovation, and the experiment is being repeated this year. Among the changes in the University system may be mentioned those relating to the tenure, number and value of University scholarships, which have been raised in amount and redistributed in consequence of the new mode of awarding Government scholarships. Extensions of affiliation were granted to various colleges in particular subjects.

Training Institutions.

232. The competition for entrance into the Central Training College is keener than ever and the number admitted in the past year exceeds the record of all the previous years. The large proportion of graduates now seeking admission to the Training College is another hopeful sign of the times. The numbers are at present too large for efficient supervision and close personal intercourse between the students and the staff, and there is a necessity for a separate Training College outside Lahore for junior teachers. It is also proposed to establish a new Training College at Jullundur.

233. The progress of normal schools and training classes continues to be satisfactory and it is interesting to note that the number of students in the Normal School for Women at Lahore rose from 35 to 64, of whom 44 were boarders. The women come from all parts of the province, except a few outlying districts.

234. A number of training classes for teachers of elementary or lower primary schools have been conducted as formerlyin connection with the vernacular middle and other secondary schools at various centres. The training lasts from 6 to 9 months : the general opinion is that these local training classes are a most useful adjunct to the normal schools and their cost is trifling in comparison. The defect of normal school training is that it is liable to become artificial ; the students have few opportunities of putting theories into practice under the conditions which they will have afterwards to face. At the Central Training College this difficulty has been partly overcome by deputing students to the various Lahore schools, where they carried on the work of the schools for a fortnight under the supervision of the college staff. The managers and teachers of the schools co-operated to make the experiment a success, and it was considered to be of benefit to the school pupils as well as to the students of the college.

Professional and Technical Education.

235. Among the professional and technical institutions the most noticeable features are the great demand for admission into the Veterinary College and the difficulty experienced in inducing recruits to join the Agricultural College at Lyallpur. It is hoped that the arrangement recently sanctioned for increasing the scholarships and improving the prospects of the subordinate agricultural service will attract more students to the college, which is admirably equipped for the teaching of practical and scientific agriculture. The restriction introduced by the Chief Court on the number of pleaders has had its inevitable effect on the Law College, where the number of students fell by nearly one-third. The Mayo School of Art has had a successful year and the development scheme, made with a view to bringing the work of the school into closer touch with the requirements and the present conditions of the crafts of the Punjab, is gradually being carried out, the present year being notable for the reorganization and strengthening of the staff. The new workshop buildings have been completed and a show-room has been opened for the exhibition of samples of craft work done in the school. Forty-four students left the school during the year of whom 29 are known to have

obtained employment on salaries ranging from Rs. 25 to Rs. 60 per mensem.

236. The number of industrial schools in the province increased from 18 with 1,767 pupils to 24 with 2,249 pupils, and some ordinary schools have industrial classes attached. It will thus be seen that there has been a considerable expansion of industrial training, but the movement is hampered by the lack of competent teachers, whom it will be the function of the Mayo School of Art, when fully re-organized, to supply.

Education of Indian Women.

237. The num be rof schools rose from 744 to 830 (6 High, 33 Middle, 791 Primary) and that of pupils from 37,445 to 42,740, or by over 14 per cent. In these figures the Normal School for Women and Queen Mary's College, Lahore, have not been included. The progress is retarded by the want of qualified teachers.

An increasing desire to continue study to a higher stage is shown by the addition of collegiate classes to the Kinnaird High School, Lahore: six students have joined. At the Victoria School, Lahore, girls are prepared for the Oriental title examinations of the University, and teachers in secondary schools frequently study for these examinations. Twenty-one girls appeared in the Matriculation examination; in the Middle School examination there were 214 candidates against 162 in the previous years: and there is a strong demand in many places for new middle schools. The framing of suitable curricula for girls' schools has occupied much attention in recent years, and curricula which are considered suitable for vernacular and Anglo-vernacular girls' schools have been issued by the Department. It is recognised that as the education of girls in this country is at an early stage of development, the courses of study should be elastic and adaptable, and should not necessarily be modelled on those for boys' schools. Many middle schools, for instance, as was pointed out last year, prefer a scheme of studies confined to languages, music, needlework, and religious instruction. In modern methods of instruction Queen Mary's College, Lahore, takes the lead, while at the other extreme are the rural elementary schools in charge of men teachers of the old-fashioned type or women of the slenderest educational qualifications.

Education of Special Classes.

238. The number of schools remains 35; but there has been an increase of one in the number of public schools owing to the opening of a primary school at Bhatinda. The number of pupils rose slightly and also the expenditure. **Education of Europeans.**

The year was one of steady progress. Thanks to the efforts of the religious and other bodies managing schools, and to the increased grants from Government, there is no longer any difficulty about obtaining a good education in a hill climate at a moderate expense for children of the community concerned. The continued improvement of the teaching staff must be kept in view as the principal object of future endeavour, together with developments on certain special lines, as in the teaching of science, domestic economy and drawing. An interesting feature is the growth of the Boy Scout movement, the total number now amounting to 300, of whom 240 have joined last year.

239. Much interest has been aroused recently in the question of the measures which might be taken to further Muhammadan education. In April 1913 the Government of India addressed the Local Governments on the subject, suggesting lines of enquiry. In reply the Punjab Government supplied statistics and general information as to the state of Muhammadan education in the province and the special measures already **Education of Muhammadans.**

adopted to accelerate progress. It was pointed out that the backwardness of the community was especially noticeable at the higher educational stages, and in this connection the opportunity was taken of urging the claim of the Islamia College, Lahore, to a substantial assistance in case funds should be available, so that the college might be provided with an adequate teaching staff and removed to a locality where there would be room for expansion. At the same time the Anjuman-i-Himayat-i-Islam were addressed on the general question of Muhammadan education, while the managing body of the Islamia College were advised to formulate schemes of improvement for that institution. The outcome, so far as the college is concerned, has been most satisfactory, the Government of India having sanctioned a liberal recurring grant of Rs. 30,000 for improved staff and equipment. The educational questions referred to the Anjuman were discussed during the year by the leaders of Muhammadan opinion with a view to putting forward definite suggestions.

In primary education in the province as a whole, the Muhammadan community holds its own. Development in secondary and collegiate education is far slower, but it is only natural that the effects of the new stimulus given to Muhammadan education should make themselves apparent first in the primary schools, and the enthusiasm which the Muhammadan community is now displaying in the cause of education supported, as it is, by substantial help from Government, cannot fail to yield excellent results.

Aitchison College.

240. At the end of the year there were 108 boys on the College roll, 17 having left and 10 joined during the year. The average age of the boys who joined was $10\frac{3}{4}$ years, which is a further improvement on the previous year's figure which was $11\frac{1}{3}$. The average daily attendance was 92. Twelve boys entered for the Diploma examination and 7 of them passed. Two passed in the aggregate but failed in English and Mathematics, and three failed. The annual competition in athletics, with the Mayo College, Ajmere, resulted in favour of the Mayo College, which won back the challenge shield wrested from them in the previous year. A successful old boys' meeting was held early in April 1913 ; 42 old boys assembled and contests were held in various sports. The discipline and health of the College were good throughout the year and the former especially was favourably commented upon by the Inspector.

A preparatory school for the Aitchison College has been started. Boys will be able to enter this at an earlier age than is possible at the College. The gain to the College which at present often admits boys wholly or partly untrained or badly trained, should be considerable.

55.—Literature and the Press.

Literature.

Books registered.

241. The aggregate number of publications catalogued has risen by 110 to 1,642, but that of copyrights registered has fallen by 64. This was only to be expected, the new Copyright Act having dispensed with the necessity of formal registration of copyright. Some authors, however, still continue to apply for it through Deputy Commissioners after crediting the amount of the prescribed fee to the Government Treasury, and in such cases copyright has to be registered as before.

Of the 1,642 works 1,176 were original, 353 were republications and 113 were translations.

Efforts were made during the year under report to ascertain if the managers of printing presses submitted for registration under the rules all the books printed by them, and it was found that several of them were unpunctual in doing so. Steps were, therefore, taken to remind them of the consequences of their neglect of duties in this respect, with the result that about 800 publications were received during the first quarter of the current year ; these will be dealt with in the next report.

The greatest number of works in any one language was in Punjabi which language, for the first time, took precedence in this respect over Urdu ; this is probably due to the exclusion of the Delhi Province—a main source of Urdu works—from the returns. English comes next in this order of precedence with about a quarter the number of the publications in Urdu and, after English, comes Hindi with less than half the number in English and a decrease of about 31 per cent. on its own total of the previous year. Works in Sindhi number 34 as against 13.

As before " Poetry " claims the largest number of publications followed by " Religion " which is also the subject matter of several poetical works. Books on Art, History and Science show a satisfactory tendency to increase, but the decrease of " Biographies " and the absence of any book on " Travels " do not speak well for popular taste. Some Punjabi novels have been written with the object of eradicating evil customs and encouraging female education. Books on history have increased in number and improved somewhat in quality, but the reverse is the case in regard to biographies, while works on art mostly relate to industrial processes and those on language are almost entirely text-books. Works on medicine, however, are of interest, and praiseworthy attempts have been made to compile a Yunani and Vedic Materia Medica, consisting of the specifics of famous Hakims and Vaids: veterinary medicine has also received attention. In poetry, considerable talent for writing in metrical language is apparent from the volume of verse produced during the year, but little true poetry is met with. Political and especially seditious literature has become almost extinct in the Punjab as a result of the Press Act, and philosophy seems to be in disfavour. Religion continues, however, to be an inspiring force, and there is a large number of commentaries and of translations of the sacred books of different religions.

The Press.

242. At the beginning of the year 1913 the total number of periodicals and newspapers of all kinds in existence in the Punjab and the North-West Frontier and Delhi Provinces was 230, of which 197 were published in the Punjab. During the year under report 34 new periodicals came into existence, while of the 264 papers thus arrived at 50 ceased publication. The following table shews at a glance the progress in newspaper activity recorded during the year in the various provinces :— Newspapers.

	Existing at the beginning of year.	Came into existence during year.	Ceased to exist during the year.	Existing at the end of year.	Net decrease.
Punjab	197	31	40	188	9
North-West Frontier Province ...	2	2	2	2	...
Delhi	31	1	8	24	7
Total ...	230	34	50	214	16

Of the 264 papers and periodicals, which were in existence during the whole or part of the year, the Delhi Province claimed 32, the North-West Frontier Province 4 and the Punjab the remaining 228; while 174 were published in Urdu, 54 in English, 22 in Gurmukhi, 11 in Hindi, and one each in Roman Urdu, Urdu-Pashtu and Urdu-Hindi : the number of daily papers was 14 of which 4 were published in Delhi and the remainder in the Punjab (*viz.*, 3 in English and 7 in Urdu, four of the latter representing the Hindu community and three the Muhammadans), while weekly and monthly publications numbered 88 and 123, respectively.

Of the 228 Punjab newspapers 138 were published in Lahore and 31 in Amritsar, while other centres of journalistic activity in the Province were Simla and Qádián (9 papers each), Ráwalpindi (7), Jullundur (5), Ludhiána (4), Gujránwála (3), Siálkot and Jhang (2 each) and Multán,

Ferozepore, Jhelum, Montgomery, Gujrát, Batála, Rúpar, Tarn Tàran, Rewári, Sadhaura, Dínga (Gujrát District), Pindi Bahá-ud-din (Gujrát District), Kála (Jhelum District) and Sargodha (one each). In addition to these the capitals of the following Native States, *viz.*, Patiála, Baháwalpur, Kapúrthala and Málerkotla, boasted of one paper each.

Circulation.

243. It is impossible to procure accurate statistics of newspaper circulation, and due allowances must be made for the natural tendency of publishers to claim for their organs a larger circulation than they actually enjoy. It is, however, beyond dispute that the year 1913 witnessed a very considerable increase in the demand for newspapers, the average circulation of all papers, so far as can be ascertained, being about 3,20,000 as against 2,80,000 in 1912 and nearly 2,90,000 in 1911. If an average of six months' publication be allowed for every paper, which came into existence or ceased to exist during the year, the average periodical circulation of each paper and periodical, works out at about 1,400 copies, while the following figures shew the ascertained actual circulation of the more important organs :—

	Copies.
English.	
*Tribune (Hindu)	1,957
†Punjabee (Hindu)	1,865
‡Comrade (Muhammadan, Delhi) ...	2,247
‖Observer (Muhammadan)	1,200
‡Khalsa Advocate (Sikh)	850
Vernacular.	
‡Hindustan (Hindu)	15,582
*Zamindar (Muhammadan)	15,000
*Paisa Akhbar (Muhammadan)	8,287
‡Fauji Akhbar (Neutral)	6,000
‡Himala (Hindu)	5,325
‡Rajput Gazette (Hindu)	4,812
‡Curzon Gazette (Muhammadan, Delhi) ...	4,340
‡Loyal Gazette (Hindu)	3,960
‡Parkash (Hindu)	3,950
*Watan (Muhammadan)	2,390
‖Vakil (Muhammadan)	2,250
*Jhang Sial (Hindu)	1,800
*Desh (Hindu)	1,663

NOTE—
*denotes daily.
† „ tri-weekly.
‡ „ weekly.
‖ „ bi-weekly.

It follows from these statistics that a very large number of the 264 newspapers in existence during the year had an insignificant circulation. Hindu and Muhammadan interests were supported by journalistic activity in nearly equal degrees, but the Sikh community, which aired its views largely through the medium of Hindu newspapers, was during the year under report, scantily represented in the journalistic world. The stirring events of the year were doubtless responsible for the large extension of newspaper circulation, which is also partly due to the rapid extension of educational facilities in the province of recent years.

Executive action.

244. The total number of declarations under sections 4 and 5 of Act XXV of 1867 reported during the year was 180. Security, when demanded under the provisions of the Press Act of 1910, usually ranged from Rs. 500 to Rs. 2,000, but the " Zamindar " Press was required to deposit security amounting to Rs. 10,000 on redeclaration after forfeiture of the security originally deposited. In the majority of cases security was not demanded, while in the case of three presses the security deposited on

declaration was declared forfeited. Demands for security resulted in the closing down of two existing presses and prevented the opening of eleven new ones, while three newspapers ceased to exist and twelve failed to come into existence for the same reason.

Warnings were administered at the request of the Local Government to the publishers of seven newspapers,—*viz. Vakil, Millat, Ahl-i-Fiqah, Hunter, Arya Patrika, Bir,* and *Bharat*—in connection with articles calculated to engender feelings of class hatred and sectarian strife, while the *Hindu* was warned for publishing an article tending to excite disaffection towards Government. The proprietors of six presses had to be reminded of the necessity for compliance with certain formal requirements of the Press and Registration of Books Act (XXV of 1867).

Foreign affairs.

245. The Balkan Wars and the affairs of Turkey were the chief topics of discussion in the Muhammadan Press.

Colonial affairs.

246. The status of Indians in South Africa aroused considerable interest in the Press, both Hindu and Muhammadan, during the year. The Immigration Law, the £3 tax and the refusal of the Union Government to recognise the validity of Indian marriages were the chief objects of resentment, the marriage question being taken up with no little bitterness by the Muhammadan papers. Towards the end of the year however a more reasonable attitude prevailed and the papers, while hailing with expressions of genuine enthusiasm His Excellency the Viceroy's sympathetic speech on the subject at Madras, were prepared to accept the view that there might be arguments on the other side worth a hearing. The year closed hopefully with the announcement that a Commission of Enquiry would consider the whole matter in the near future.

Domestic affairs.

247. As usual the questions of *Jhatka-Halal* and kine-killing were freely discussed in the Press.

The attempt on the life of the Viceroy at Delhi and the Lahore bomb incident gave rise to much general discussion of the subject of anarchism in India. The Press was almost unanimous in its condemnation of the use of anarchical means for political ends, enthusiastically congratulated the Viceroy on his recovery, and reiterated its strong disapproval of the methods of extremists in connection with the Lahore bomb case.

The question of self-government for India recurred frequently in the columns of the Press. The leading Hindu papers whole-heartedly preached and supported the Congress ideal in the matter, while Muhammadan papers exhibited a tendency to adopt the same policy.

Legislation.

248. The Conspiracy Bill, which was presented to the Imperial Council in March 1913, and was regarded as the inevitable but none the less undesirable sequel to the Seditious Meeting and Press Acts of former years, was vigorously combated in the Press, the leading Hindu organs being most conspicuous in the matter. Other Acts of the legislature attracted little attention, but the Punjab Land Alienation Act continued to be unpopular with the Hindu Press, while the question of placing a legal check on usury was actively mooted by several Muhammadan papers. The question of the constitution of the Provincial Legislative Council formed an absorbing topic of discussion, when the results of the new elections and nominations were made known, no party being entirely satisfied with the final composition of the new Council. The Hindu Press was also dissatisfied with the representation of the Punjab in the Imperial Legislative Council.

Native States.

249. The resignation of the Chief and Home Ministers of the Patiála State gave rise to but little comment and was soon forgotten by the Press. The affairs of Bahawalpur, however, attracted more attention in connection with the introduction of an income tax in the State.

INSTRUCTION.

Political organisations.

250. The Muhammadan Press was much exercised throughout the year over the split in the ranks of the All-India Muslim League brought about by the refusal of the old leaders, Mr. Amir Ali and Sir Agha Khan, to recognise the "mission" of Mr. Muhammad Ali and Sayad Wazir Hussain.

The affairs of the Indian National Congress did not attract much attention, though the readiness of Muhammadans to share in its counsels and adopt its general policy was approved in many quarters.

The Hindu Press expressed much disappointment with the lack of public interest in the affairs of the Punjab Hindu Sabha and Hindu Conference, but found consolation in the reflection that much of the work of these bodies was devolving on such agencies as the Arya and Brahmo Samajes.

Education.

251. The attitude of Government towards the Hindu and Muslim University schemes came in for much comment by all sections of the Press. The line taken was that the duty of Government in the sphere of education was to provide such financial assistance as might be demanded and, having done so, to leave the various communities to work out their own educational salvation. The Imperial Government's circular letter to Local Governments on the subject of Muhammadan education was well received by the Muhammadan Press. The proposal to apportion scholarships in the Arts Colleges of the Punjab on a communal basis was unfavourably received and regarded as a retrograde measure by the Hindu Press. On the subject of advanced education on western lines for girls Hindu papers waxed enthusiastic, but the majority of Muhammadan organs viewed with apprehension the extension to women of a system of education, which was justified in the case of man only by the material benefits accruing therefrom.

Miscellaneous.

552. Among other topics of discussion, which engaged the attention of the Press during the year, may be mentioned the Royal Commission on the Indian Public Services; the question of the separation of Executive and Judicial functions; the merits and demerits of the existing system of Police administration, and finally the oft-discussed problem of the Haj pilgrimage.

56.—Literary Societies.

(*Vide* pages 196 and 197 of the Administration Report for the year 1911-12).

57.—Arts and Science.

The Lahore Museum.

253. The total number of visitors during the year was 371,306, and the daily average was 1,055. This is a slight decrease on the previous year and is due to the institution of a weekly Students' Day, when students and others interested in arts and science alone are permitted to enter the museum. This has been much appreciated. Twelve days were reserved for pardanashin ladies and numbers took advantage of these opportunities.

The Local Government have sanctioned the grant of Rs. 25,000 for the proposed extension to the buildings, which, when built, will provide a large extra gallery and certain other rooms. The most remarkable addition in the Art and Manufactures Section of the Museum was a silver-necklet from Nepal; the Natural History Section still deteriorates for want of a capable taxidermist. The collection of pictures in the museum has been classified and arranged by Mr. S. N. Gupta who has also written descriptive notes and labels for each and is preparing a catalogue. The cion catalogues prepared by Mr. R. B. Whitehead, I.C.S., are a great acquisition and form excellent works of reference.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1914, also in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1913-14.

58.—Archæology.

Hindu and Buddhist Monuments.

254. In the year under review Rs. 3,870 have been expended on the preservation of Hindu and Buddhist Monuments in the Punjab. These sums have been spent principally on annual repairs, but special repairs were carried out at the Basheshar Mahadev Temple at Bajaura. Material was also collected at Baij Nath for special repairs to the famous shrine there, while proposals for the conservation of the rock-cut temples at Masrur in Kángra District are under the consideration of the Local Government; these last temples have now been notified as "protected" under Act VII of 1904. Rock-cut temples are by no means uncommon in other parts of India, but these Masrur temples present a number of unique features. The shrines are exact representations of structural "sikharas" of the so-called Indo-Aryan type and being carved from the crowning ridge of the hill occupy, unlike the Dhamnur and other Brahmanical monolithic temples, a position of peculiar architectural advantage. The Samadh of Maharaja Ranjit Singh, together with the Samadhs of Rajas Kharak Singh and Naunihal Singh at Lahore, and the old Badshahi bridge five miles south of Karnál, have also been declared as protected monuments. No opposition has been met with and a very pleasant feature has been the willingness of the managers of shrines to avail themselves of the advantage of protection and to carry out the suggestions advanced by the Archæological Department.

British and Muhammadan Monuments.

255. Rupees 51,600 were spent in the Punjab under this head in 1913-14, the buildings principally concerned being at Lahore. An interesting piece of excavation work has been carried out at the Lat-ki-Masjid at Hissar, where a number of underground rooms have been disclosed, and it seems likely that from these buildings an underground passage will be found communicating with the palace buildings now occupied by the Superintendent of the Government Cattle Farm. This house, it has been proposed, should be converted into a circuit house, and if this is done the surroundings will well repay clearance. There is no doubt that it would make one of the most interesting and attractive sites in the Punjab if properly treated.

The work at the Hazuri Bagh, Lahore, has been completed at a cost of Rs. 12,374, and efforts are being made to clear the surroundings of the garden which are in an untidy state. At the Badshahi Jama Masjid more than Rs. 8,000 have been spent in repairs to the east main gate, the parapet, turrets and finials of which have been rescued from their former precarious condition, sand-stone facing being reset where necessary. Various works are proceeding at Lahore Fort, the most important being the conservation of the Bari Khwabgah, and the "Roman Catholic Chapel." It is hoped soon that the red sand-stone buildings of Jahangir surrounding the court, lying between the Bari Khwabgah and the Diwan-i-'Am, will be emptied and cleared of their unsightly modern additions. Provision has

ARCHAEOLOGY.

been made in the Military budget for the sum of Rs. 30,000 for the construction of new quarters in Lahore Cantonment for certain of the details who now have quarters in the historical building. The buildings which lie on the east and west sides of the court referred to, are among the most interesting buildings in the Fort and are adorned with detail which stamps them unmistakably as being the work of the early Moghal period. They are now almost entirely unrecognizable owing to the modern additions that have been placed in them and in front of them.

Various works have been in progress at Shahdara and Shalamar in Lahore, at the Shahi Masjid in Jhang District, at the tomb of Shaikh Chilli at Thánesar, and at the Kábul Bagh Mosque at Pánipat.

Enquiries have been made with the help of several Local Governments with a view to fixing the position of all the Kos minars or old Moghal milestones in the areas under their jurisdiction and, thanks to the ready consent of the authorities concerned, estimates have been prepared for the repair of nearly all the minars, and many repairs have been executed. There are nearly 80 of these between Delhi and Lahore.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

(For this section reference should be made to pages 201—207 of the Report for 1911-12.)

60.—Ecclesiastical.

256. In the year under review His Majesty's Secretary of State for India sanctioned a grant of Rs. 25,000 towards the building of a new chancel for the Anglican Church (Christ Church), Simla, and the Local Government gave a grant of Rs. 218 for reflooring the chancel of the church at Hoshiarpur. Permission was accorded to the consecration of the Government church at Lyallpur by the Bishop of Lahore; but the same concession was withheld in the case of the Anglican Church now being built at Dalhousie Cantonment. The reason was, that as British troops are quartered in the Cantonment, consecration of a Government church to the exclusive use of any particular denomination is not advisable unless proper provision can also be made for the worship of the other denominations recognised by Government. In Dalhousie this is not yet the case, and accordingly, when the Anglican Bishop offered a contribution from private subscriptions towards the building of the church, on the condition that it should be consecrated for the use of the Church of England services, His Grace was informed that the contribution could not be accepted because it was necessary that the Government of India should retain complete control over the building.

61.—Stationery.

257. The value of stationery issued by the Stationery Department at Calcutta to offices in the Punjab, during 1913-14, was Rs. 1,06,508, and to Presses Rs. 99,620, making a total of Rs. 2,06,128, for the year. Owing to an alteration of the date on which indents are submitted to the Stationery office, a comparison with the figures of previous years would be of little value.

62.—Punjab Government Press.

258. The following statement compares the income and expenditure with the value of the work turned out during the years 1912-13 and 1913-14 :—

Year.	Income.	Expenditure.	Value of outturn.
	Rs.	Rs.	Rs.
1912-13 ...	27,279	2,13,892	1,56,459
1913-14 ...	25,236	2,26,313	1,72,780

The income of the Press has decreased by over 7 per cent., while the expenditure has risen by more than 5 per cent., and the value of the outturn by more than 10 per cent.

Printing for departments and offices during the year amounted to Rs. 49,149 as against Rs. 39,887 last year.

PUNJAB ADMINISTRATION REPORT, 1914-1915.

Revised list of Agents for the sale of Punjab Government Publications.

In the United Kingdom.

Constable & Co., 10, Orange Street, Leicester Square, London, W. C.

Kegan Paul Trench, Trübner & Co., Limited, 68-74, Carter Lane, E. C. and 25, Museum Street, London, W. C.

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Ernest Leroux, 28, Rue Bonaparte, Paris, France.

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Manager, Punjab Law Book Depôt, Anarkali Bazar, Lahore.

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R. Cambray and Co., Calcutta.

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T. Fisher Unwin, Calcutta.

V. Kalyanaram Iyer & Co., 189, Esplanade Row, Madras.

G. A. Natesan & Co., Madras.

Superintendent, American Baptist Mission Press, Rangoon.

REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1914-1915.

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1916.

INTRODUCTION.

The "year" throughout this report is not invariably the financial year ending 31st March 1915. At the heading of each chapter with the exception of chapter I, a reference is given to the departmental reports which contain details of the subjects dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the "year" in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1915, in chapter II it is the revenue year ending 30th September 1914, and in chapters III and VI it is the calendar year ending 31st December 1914.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.

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REPORT

ON THE

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PUNJAB AND ITS DEPENDENCIES

FOR

1914-15.

PART I.

GENERAL SUMMARY.

CHANGES IN THE ADMINISTRATION.

Personnel.

1. Sir Michael O'Dwyer, K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report.

General.

2. Effect was given from August 1st, 1914, to the scheme for the reorganisation of the judiciary mentioned in last year's report. The entertainment of a third Temporary Additional Judge of the Chief Court was sanctioned for six months for the inspection of subordinate courts. Owing to the increase of work caused by the war it was found necessary to appoint an Additional Secretary to Government.

The Punjab and the War.

3. The outbreak of the war evoked an inspiring display of loyalty on the part of all classes. The prompt and spontaneous enthusiasm with which the Rulers of the Native States hastened to give practical proof of their devotion to the Empire, and their generous offers to place all their resources at the disposal of Government, for the common cause, were beyond all praise. Space is lacking to do full justice here to the readiness with which the larger States equipped their Imperial Service Troops and despatched them to the front wherever their services could be utilised, or to the splendid liberality with which all States, with hardly a single exception, came forward with offers of money for the relief fund, and to meet the war charges, of horses, camels, tents, motor cars, hospital appliances, in fact of everything which could help the troops in the field, relieve the wounded, and safeguard their dependants against distress and want. The war, in short, supplied the occasion of putting to the test the proverbial loyalty of the Ruling Chiefs of the Punjab, and they came out of that test with a still nobler reputation for fidelity to the King-Emperor and devotion to the cause of the Empire. The attitude of the Chiefs was only typical of the enthusiasm of the rest of the Province. In particular the decision to employ Indian troops in Europe inspired lively satisfaction. Public feeling found appropriate expression in a resolution of the Provincial Legislative Council passed on September 19th, 1914, conveying to His Majesty the King-Emperor an assurance of the staunch loyalty of the people of the Punjab and of their determination to maintain the proud martial traditions of the

Province, which justly claims to be the spear-head of the Indian Empire. How amply that undertaking has been fulfilled on the battle-field must be left to historians of the war to describe. It is significant, however, to note that it was a Punjabi of the Jhelum District, namely, Khudadad Khan of the 129th Baluchis, who was the first Indian to win the coveted distinction of the Victoria Cross, and that whereas in the whole of India during the seven months, from the 1st September 1914 to the 1st April 1915, 52,247 new recruits were raised, or $3\frac{1}{2}$ times the annual quota, the Punjab furnished 26,205, or more than half of this number. These figures speak for themselves.

4. On the other hand it would be idle to disguise the fact that for several months the authorities had to deal with certain abnormal, but it is to be hoped transitory, features that occasioned serious anxiety. The country was, in the latter portion of 1914, confronted with a conspiracy organised among Indian settlers and emigrants abroad to subvert the authority of Government, more particularly in the Punjab, by a nefarious policy of murder and rapine. The conspiracy originated amidst the Indian colony in America, and there is no doubt that assistance was given to it by individual Germans, and that the revolutionaries considered themselves in league with our enemies. The great majority of those concerned were Sikhs, but in justice to that community it should be stated that they were almost without exception men of obscure origin and of very little education, who had been made the tools of more able and dangerous plotters. Their conduct, methods and aims were entirely repugnant to the great mass of the Sikhs in the Punjab who showed no hesitation in repudiating them. The first noteworthy event was the riot at Budge Budge in September following upon the unfortunate attempt of Gurdit Singh and his associates to evade the immigration laws of Canada. The importance of that affair to this Province lies in the large Punjabi element among the rioters. Although a considerable number of the men concerned in it, as well as other dangerous characters, were interned, or otherwise subjected to restrictions under the Ingress Ordinance, the strength of the conspirators was continually being augmented by fresh arrivals from America, Canada, and the Far East, and they very shortly inaugurated an extensive campaign of murder and dacoity in the Central Punjab. Graver indications of their activities were to be found in the rising planned for the 19th February at Lahore and Ferozepore, the bomb attempt on the Doraha bridge in Ambala, and attempts to seduce troops to mutiny at Lahore, Meerut, the Wilsonpur Grass Farm at Sargodha, Ferozepore, and other cantonments in Northern India. Had not these crimes been checked by prompt and successful action on the part of Government, the police, and district officials, a state of affairs would have supervened similar to that of Hindustan in the mutiny—paralysis of authority, widespread terrorism, mutiny of troops, wholesale robbery and murder not only of the officers of Government, but of loyal and well-disposed subjects. Fortunately the task of dealing with this conspiracy has been much facilitated by the cordial co-operation of the people, who, true to their traditions, were prompt to show that as a body they had no sympathy whatever with the anarchic ideas and

terrorist methods of the revolutionaries. As an instance of the effective support given spontaneously by the people may be quoted the Ghall murder case in the Ferozepore District, in which a Sub-Inspector of Police and a Zaildar were shot dead in broad daylight on the open road by a gang of returned emigrants. The neighbouring villagers promptly turned out and the bulk of the gang were rounded up and captured. A number of the offenders in these cases were given exemplary sentences by the ordinary courts, but the majority of the conspirators arrested were committed for trial by a Special Tribunal held at Lahore. The record of this trial, one of the most momentous in the history of the Province, belongs to the report for the year 1915-16; it will suffice to state here that 57 persons were convicted by the tribunal, 24 sentenced to death, 27 to transportation for life, and the remainder to different terms of imprisonment. The death sentence was, however, commuted by His Honour the Lieutenant-Governor in one instance, and in the case of 16 others by His Excellency the Viceroy.

5. While the authorities were busily engaged in checking this dangerous movement in the Central Punjab, another storm burst unexpectedly in the south-west of the Province, where a section of the Muhammadan rural population, partly under the stimulus of high prices, and partly encouraged by mischievous reports in the Press and elsewhere as to the weakness of the British Government and the successes of its enemies, took advantage of the panic caused by the outbreak of plague and the desertion of shops by Hindu owners to begin a campaign of lawlessness and looting, in some cases combined with arson, against their Hindu neighbours. Nearly 100 dacoities were committed in the Jhang, Multan and Muzaffargarh Districts between the 22nd February and the 20th March, before order could be restored by the strengthening of the Police and the movement of troops into the affected area. Over 3,000 arrests were made. Special Magistrates were appointed to deal with the bulk of the cases, the more serious being tried by a Special Tribunal at Multan.

6. It is impossible to recapitulate here the action taken in this Province under the various emergency measures applicable to the whole of India which were framed by the Supreme Government for the maintenance of internal security, the control of the Press, of hostile aliens and other foreigners, and for the regulation of trade and the like. They threw a large burden of additional work on officials in many departments, who, however, responded cheerfully to the calls thus made on them. One matter deserves notice in view of its special importance to this Province, namely, the control assumed by Government of the export of wheat. The high prices of wheat and other food-grains shortly after the outbreak of the war gave rise to much anxiety. Inquiries, which were made under the provisions of the Wheat Ordinance, did not, however, show that any large stocks were being withheld, and it was not until the notification by the Government of India at the close of December limiting the amount of wheat permitted to be exported had had time to produce its effect that any substantial diminution took place in the price of wheat and other food-grains. The subsequent history of Government's

action in connection with this subject falls outside the purview of the present year's report.

7. The amount contributed in the Province up to the end of March towards the Imperial and Provincial Relief Funds was Rs. 10,55,797. The Province also contributed generously to a large number of other funds of which space does not permit a record.

Relations with Tributary States.

8. The outstanding feature of the year was the outburst of loyalty displayed by the Ruling Chiefs of the Province, to which tribute has already been paid. The principal changes in the administration of the States were as follows :—The Faridkot Council of Regency was abolished, and it was decided to administer the State through a Superintendent, who has been given the assistance of a few Government officials for the purpose of reorganising the principal departments. A scheme for the improvement of the administration has been drawn up, and from experience gained so far there is every reason to hope for its success. Mr. L. French, C.I.E., I.C.S., who had, as Chief Minister, assisted the Maharaja of Kapurthala in the administration of his State during the past five years, reverted to British service. Raja Shamsher Singh of Bashahr died in August, and was succeeded by his adopted son, Mian Padam Singh.

Frontier affairs.

9. The Bozdar and Kasrani tribes were responsible for a serious outbreak of dacoity, stimulated partly by the European War and partly by the intrigues of Sardar Faqir Khan, the younger son of the Bozdar Tumandar. The offenders were duly punished, and the Sardar sentenced to a long period of imprisonment. There were also disturbances among the Sori Lunds, in connection with the payment of batai. Otherwise the behaviour of the tribes was generally satisfactory.

Condition of the people.

10. Climatic conditions were favourable, and the autumn and spring harvests were rather above the average. Wages continued to rise, and though the fall in the price of cotton, and the dearness of the coarser food-grains in the latter half of the year made themselves felt, rural prosperity was on the whole well maintained.

The Province had a fairly healthy year, though the early winter rains brought about a recrudescence of plague, the full effect of which was not felt till after the close of the period under report. The birth-rate showed a marked improvement, and though the death-rate rose slightly, infant mortality was substantially less. Cholera was more prevalent and more severe than in 1913, and the number of deaths from fevers rose. On the other hand the mortality from small-pox was low.

Administration of the land.

Land Revenue.

11. The total fixed and fluctuating revenue of the Province was 330 lakhs as compared with 233 lakhs in 1901-02. During the interval the amount of the fixed revenue has risen very slightly ; that of the fluctuating has owing mainly to the development of the Canal Colonies increased more than fourfold. But whereas in 1901-02 nearly

40,000 processes were required for the collection of 206 lakhs, in 1913-14 no more than 12,500 were issued to aid in the collection of a demand nearly half as high again.

The suspension of 7¼ lakhs in the Ambala Division contrasted with the collection of 4 lakhs of arrears in the Rawalpindi Division reflects the diversity of weather conditions at the two different ends of the Province. Of the total fixed demand of 212 lakhs the unsuspended outstandings at the close of the year were less than Rs. 16,000. The fluctuating land revenue rose from 100 lakhs to 118 lakhs, owing partly to the resettlement of the colony areas under the fluctuating system, and partly to the reassessment of fixed land revenue which had not been brought on to the rent roll by the end of the year.

Assessments of fluctuating revenue are now being more carefully supervised, and as a rule the Settlement Officer's estimates are more closely worked up to. Collection is easy and the system is generally appreciated in the Canal colonies and the south-west of the Province, where it has been in force long enough for the people to realise its advantages.

Surveys.

12. The Survey Department again gave valuable assistance, and completed the Riverain Survey and the survey of the Khushab Thal. Surveys were also completed of part of the area commanded by the Upper Chenab Canal, and work is still proceeding in the Kangra District. Several minor boundary questions were settled, and an inquiry was instituted in conjunction with the United Provinces Government, preliminary to the determination of the inter-Provincial boundary along the Jumna.

Settlements.

13. Settlement operations were in progress in ten districts during the year. The Settlement of Jullundur was commenced, whilst work in Amritsar, Hoshiarpur and Lyallpur was completed.

Inquiries were recently made regarding the proportion borne by the revenue demand to the total value of the agricultural produce. In the nine most recently assessed districts in which the demand is fixed the percentage averages rather under 11·5, or about one-ninth. The settlement figures are, however, based on the commutation prices which are always fixed with a margin of safety. In only one of the nine settlements in question was the commutation price of wheat fixed at above 32 annas per maund. In the ninth, that of Amritsar, the highest rate assumed was 36 annas. It must be a long time since cultivators had to sell at such low prices as these. The rates assumed for other crops are equally cautious. It may be safely asserted that the actual prices received by the cultivator in recent years are from 25 to 50 per cent. above the rates on which the assessment is based, and it follows that in practice the share of the produce represented by the revenue demand averages considerably less than one-tenth.

Land Records.

14. The experiment of giving certain field kanungos power to attest mutations of undisputed inheritance has not been an unqualified success. It is said that the kanungos do not understand the limits of their powers, and that the attestation work interferes with their other duties. Final judgment on the system, which was only sanctioned as an experiment, must, however, be deferred.

The state of the annual records has improved, owing to better supervision by the higher ranks. There appears, however, to be room for the introduction of a more systematic inspection of the work of kanungos, naib tahsildars, and tahsildars at least once a year.

Canal Colonies.

15. During the year under review sanction was given to the schemes for the colonization of the areas commanded by the Lower Bari Doab Canal and the Upper Jhelum Canal, and a new stage in colony history may be said to have commenced. Questions of allotment and arrangements for settling the new colonists once more came into prominence. Progress was delayed on the Lower Bari Doab owing to the damage done by the floods to the Upper Jhelum Canal Head-Works. Still 146,150 acres were allotted. The area reserved for Military grantees was increased from 103,000 to 178,000 acres in order to make more liberal provision for services in the present war, and it is believed that this measure has had considerable effect in stimulating recruiting in the Province.

A particular feature of the Lower Bari Doab Colonization scheme is the number of special grants of considerable areas for such purposes as horse breeding, cattle breeding, cotton farming and steam ploughing. The excellent start made by Captain Vanrenen on his horse breeding grant is a hopeful augury for future success. The conditions of the horse and mule breeding grants in the Jhelum and Chenab Colonies are now more carefully observed. It was only found necessary to confiscate one such grant during the year. Colonists continue to avail themselves freely of the right to purchase. In Lyallpur nearly 10,000 acres were sold by the recent purchasers. The average price was Rs. 167 per acre for land which was purchased from Government at Rs. 12-8-0 in the case of peasant, and Rs. 20-10-0 in the case of other grantees. The fact that in spite of the large profits obtainable transfers were not more frequent than they were, is strong evidence of the attractions of the colony. The re-assessments of the Chenab Colony were successfully completed during the year, and the fictitious agitation of 1913 appears to have completely subsided.

The activity of the various colony towns in providing drainage and water-supply schemes and in improving sanitation generally is creditable to them. It was decided to offer free sites in the proposed Mandis in new colony towns to persons willing to construct grain elevators.

Court of Wards.

16. Three new estates including the historic estate of Attari, were taken under the charge of the Court of Wards, and three were released in a sound financial position. The management of estates continues to be generally satisfactory. Large investments have been made in land in the new colonies, liabilities are being steadily reduced, and the accounts are in good order. The Kot Co-operative Bank has made a good start and its example might well be followed in other estates with a large body of tenants. The endeavour that is being made to associate wards with the management of their estates by employing them as Assistant Managers is an important feature of the year's work. The principal weakness in Court of Wards administration consists in the fact that an estate once released from superintendence is apt to return to its old condition, but it is hoped that the training which wards will receive

as Assistant Managers, and the knowledge which they will obtain of the principles on which the estate has been managed by the Court and freed of its liabilities, will help to overcome this defect.

Revenue and rent-paying classes.

17. The agricultural prosperity of the Province may be gauged to some extent by the figures of alienation. The cultivated area redeemed exceeded that mortgaged by nearly 37,000 acres. During the six years ending 1891-92 the annual excess of cultivated area mortgaged over cultivated area redeemed amounted to no less than 143,000 acres, which, put in another way, means that at that period the net area under mortgage was increasing at the rate of half a tahsil a year. The percentage of the cultivated area now held on mortgage is only $11\frac{1}{2}$.

Although there were 10 districts under settlement there was a fall in the number of suits for enhancement of rent. On the other hand, proceedings against tenants-at-will for ejectment increased, but relations between landlord and tenant are on the whole friendly, and the position of the latter, already strong on account of the demand for cultivators in the colonies, will become still more favourable with the progress of the Lower Bari Doab Scheme.

Legislative Council.

Legislation.

18. There were three changes among nominated members of the Council during the year. Three meetings were held. Only one Bill—a Bill to amend the Punjab Courts Act—was passed. Two resolutions, one on the subject of Beggary, and the other relating to a Government contract, were withdrawn, and two were passed, one of sympathy with His Excellency the Viceroy on the occasion of the death of Her Excellency Lady Hardinge, and the other on the war. One hundred and fifty-two questions were put and answered. Twelve Acts of the Imperial Council more particularly affecting the Province became law.

Protection.

Police.

19. The decrease in crime which was first noticed in 1913 has been maintained in the year under review. The returns of true cognizable crime (47,375) again exhibit a slight decrease of 501 cases and there is some ground for the belief that but for the disturbance of normal conditions created by the war, the criminal record of the Province, which seems to have reached its high water mark in the year 1912, would have shown even a more marked improvement. The most satisfactory feature of the year is the very substantial drop in murders from 625 in 1913—which is the highest figure on record—to 538. The other forms of violent crime—dacoities and robberies—show only a slight falling off, but it seems clear that, had the war not intervened and given rise to the revolutionary activities of returned emigrants and to other forms of unrest, the decrease in dacoities and robberies would have been equally marked. The Western Range and in particular the trans-Jhelum districts, where lawlessness of the worst type was rampant and authority openly flouted a few years ago, show a most marked change for the better. The police force passed through a very critical period, and the steadfastness which it has shown under trying conditions in grappling with novel and dangerous types of crime and criminals while at the same time dealing successfully with normal crime deserves ample recognition.

Reference has already been made to the active co-operation of the people in assisting the authorities. The vital importance of enlist-

ing their aid can hardly be exaggerated, and the numerous instances in which it was effectively given demonstrate in the clearest possible way the necessity of showing prompt recognition and in suitable cases of liberally rewarding those who furnish active assistance to the police and magistracy in their efforts to cope with crime. Remissions of revenue, grants of land, monetary rewards and public commendation are forms of recognition which have been utilised with excellent results during the past year.

The preventive sections of the Criminal Procedure Code are more extensively used now than they were three or four years ago. It must be admitted however that these sections as they stand are not as complete and satisfactory a method of dealing with the professional criminal as they might be, and the question of a reform on lines, which, while placing this class under stricter control, will obviate the alternative of confinement in jail in default of security—an alternative apparently much more common in other Provinces than in the Punjab—is now engaging the attention of Government. An amendment of the Criminal Procedure Code with this object in view was indeed suggested to the Government of India, but possibly a more satisfactory solution may be found either in special legislation or in the application on broader lines of the Criminal Tribes Act.

The police force was substantially strengthened during the year, the increase being mainly due to the requirements of the canal colonies, the expansion of the railway town of Mughalpura and the necessity for strengthening the staff of the Criminal Investigation Department. This latter branch of the service has, owing to the revolutionary and seditious activities produced by the war, been saddled with very arduous responsibilities, and it is fortunate that it was reorganised in time to deal with the various under-currents of more than one dangerous movement. Concurrently with these measures, however, the Lieutenant-Governor sanctioned a searching enquiry into the distribution of the police throughout the Province and an officer was placed on special duty for the purpose. There is reason to believe that considerable economy can be effected by a redistribution of the force on lines which are more in accord with modern conditions, but this will be more than counterbalanced by the early necessity of increasing the pay of the lower ranks, a question which is now under the consideration of Government.

A novel feature of the year was the mobilisation of the police reserves for training and patrol purposes. This training was thoroughly organized and carried out by Mr. Mercer, Principal of the Police Training School at Phillaur, and the results were seen in the systematic patrols of the Manjha and Doaba tracts, in co-operation with military detachments, which were carried out towards the end of the year. These patrols in force did much to restore confidence in areas, which the lawless elements among the returned emigrants were attempting to terrorise.

Criminal Justice. 20. The decrease in the volume of crime coincides with improved results in the Criminal Courts. The percentage of cases resulting in conviction or compromise rose from 71 to 73, and of those resulting in conviction from 36 to 37. In murder cases convictions rose from 47 to

49 per hundred persons tried. There has been a slight fall in the percentage of successful appeals in all classes of appellate courts. The higher the class of appellate court, the smaller the chance of success.

The Reports on the Administration of Criminal Justice in Bengal and the United Provinces for the year 1913 suggest some interesting comparisons with the Punjab. It is impossible to give the full details here, but the large volume of reported crime in this Province, the low percentage of convictions, and the number of appeals seem to point to a much more reckless use of the courts in the Punjab than in the other Provinces named. The stubborn courage and the tenacity which are such admirable qualities in the Punjabi as an agriculturist, a colonist or a soldier, show him to less advantage as a persistent and often unscrupulous litigant. The striking discrepancies between the figures for the different Provinces appear to be mainly the result of differences of race and environment. These differences manifest themselves also in the relative duration of the cases in the courts of these Provinces. In Bengal the average case in a Magistrate's court is disposed of in a week. In the United Provinces it takes a day or two longer, but in the Punjab it is fought with such keenness that it takes 19 days to decide. The same phenomenon of a higher relative duration appears in the Sessions Courts and in the Chief Court of this Province.

The general conclusion appears to be warranted that in spite of the efforts made to weed out false and frivolous cases *in limine* (in the year under report no less than 31 per cent. were so dealt with), the time of the courts is still wasted to an appalling extent by false cases supported by false witnesses, the result being congestion and inordinate delay. It is difficult to accept the view put forward by some District Magistrates that this perversion of the criminal courts acts as a useful safety valve in furnishing an alternative to expensive civil litigation or to a settlement by violence, and further measures seem to be called for in order to limit this abuse.

The year's figures again give a striking illustration of the close connection that exists between duration and the percentage of convictions,—a principle that must now be accepted as axiomatic. In six districts, in which the average duration was less than 20 days, the average percentage of convictions was 40. In eight in which the average duration varied from 22 to 33 it was 31. The figures exhibit clearly the evil results of delay, and it is to be hoped that they will receive close attention from the Magistracy and the Police.

The systematic inspection of subordinate courts by a Judge of the Chief Court, specially deputed for the purpose, was undertaken for the first time in the cold weather of 1914-15 and will no doubt be productive of great benefit.

Prisons.

21. The year 1914 was an abnormal one in the history of the Punjab jails. The number of prisoners was unprecedented, the difficulties of management were, for a variety of reasons, exceptional, and, towards the close of the year, the expert controlling staff was for the most part withdrawn for military duty. The most marked effect of this withdrawal was to be seen in the deterioration of the general health

of the Jail population, the mortality rising to nearly 25½ *per mille*, thus furnishing a reminder that the standard of administration can only be kept from slipping backwards by perpetual watchfulness and trained supervision.

The scheme for the provision of a new Central Jail at Jullundur was delayed by unexpected difficulties regarding the supply of water. Pending a decision as to the site of the Tubercular Jail, tubercular prisoners have been temporarily provided for in the old District Jail at Shahpur.

There was a drop of nearly 2,000 in the number of offences amongst prisoners in spite of a rise of over 1,300 in the daily average prison population. There is no doubt that the standard of conduct and industry amongst the inmates of our prisons has been improving steadily year by year, and though the proportion of major punishments is high as compared with other provinces with a less turbulent population, there is no cause to criticise the Punjab system adversely on this account.

The enquiry made by Sir Edward Maclagan into various questions connected with jail manufactures will, it is hoped, have valuable results. The profits of jail factories were nearly 40 per cent. in excess of those of 1913, with the satisfactory result that the average net cost per prisoner fell to Rs. 59-9-0.

Civil Justice.

22. The leading feature of the year in the administration of Civil Justice was the abandonment of the old divisional system and the introduction of District and Sessions Judges. It would appear that ultimately there will be little practical difference between the new system and the old, except in regard to administrative control. The increase in the number of superior courts has, however, produced an immediate result in the fall in the average duration of appeals from 154 to 141 days and in a slight reduction of the pending file. The duration of contested cases in courts below district courts has also fallen from 75 to 74 days. This is satisfactory as for several years past the duration has been increasing.

There has been a rise in the number of suits of about 3,500, from 191,702 to 195,266. The average for the past 12 years is about 192,000 and during five of those years the figure for 1914 has been exceeded. There is on the average one suit for every 103 of the population as compared with one for every 268 in the Province of Agra. The increase is mainly in money suits. Title suits, including suits based on a mortgage, have decreased. The pending file in the Chief Court is slightly less heavy than in some recent years, in spite of the very heavy criminal work of which the Judges had to dispose.

The working of the Insolvency Act has been subjected during the year to a careful examination and the Local Government has recently addressed the Government of India in regard to its amendment. The numbers of applications and declared insolvents have again risen, but the results of the present year show improvement in respect of the percentage of insolvents discharged, and the satisfaction

of claims. Efforts made to discourage the abuse of the Act in the colony districts have been to some extent successful. Application under the Guardians and Wards Act were fewer than in the previous years. The Chief Court's rules under the Act have been amended with the object of lessening the heavy burden which its administration imposes upon the courts of certain districts.

Registration.

23. While the number of compulsory registrations increased by 3 per cent., the rise in the value of the property transferred was no less than 11 per cent., and furnishes a striking indication of the steady rise in the value of land. The admission to registration of documents contravening the Land Alienation Act is rare, but does occasionally occur. Rules have now been issued requiring the registering officer to note against the copies of such documents that the sanction of the Deputy Commissioner had not been obtained and that registration was in contravention of section 17 (2) of the Act. Benami transactions are still fairly common, especially in the west of the Province, but they are rarely discovered at the time of registration.

Local self-government.

District Boards.

24. Elections held during the year failed to evoke any great interest, only 36 out of 185 vacant seats being contested. Membership of a District Board is, however, certainly prized, and the continued re-election of old members without contest and the withdrawal before election of candidates who recognize that they have small chance of success prove not so much a lack of interest on the part of the voters or indifference to the privilege of membership of the boards as the general popular recognition that the right men have already been chosen, and that it would be unseemly to question the popular choice by forcing an election.

The working of most of the boards is reported to be satisfactory, and though in many districts the members are said to take little interest in the actual proceedings of board meetings, it is generally acknowledged that when they are called upon individually or in sub-committees to undertake definite duties they discharge them satisfactorily. Much of the work consists of the disposal of purely routine matters governed by hard and fast rules, and in some cases the so-called apathy of members may be due to the fact that they do not always grasp what is going on and do not realise that they have power to influence the issue. Assuming this to be correct, the remedy lies in the hands of the Chairmen. The more frequent employment of standing sub-committees to dispose of routine business and to report on proposals before the board would also help to relieve the proceedings at meetings of much of their tedium and leave more time for the discussion of larger questions of greater interest.

Much useful work was, however, done by sub-committees in supervising schools, arboriculture, cattle-breeding, veterinary hospitals, dispensaries and petty works. The general question of the constitution and powers of the District Boards and the devolution of authority to local boards or sub-committees is being examined in connection with the recent resolution of the Government of India regarding local self-government.

The attention paid to education is one of the most satisfactory features of the year, and expenditure by District Boards rose by two lakhs. A start was made in a few districts with measures for the improvement of the breed of sheep and goats. Practical steps for the amelioration of the sanitary conditions of rural tracts have been taken by the imposition of conservancy taxes in two areas, and by the carrying out of several minor drainage and water-supply schemes. Though but small beginnings these may rightly be looked at as signs of progress, and as justifying the investiture of the Boards with further powers to enforce elementary rules of hygiene.

Municipalities.

25. The interest displayed in municipal elections furnishes a remarkable contrast to the state of affairs in regard to district boards. Not only were 46 per cent. of the elections contested, but the number of voters who came to the poll was also most encouraging in many instances. There is a very real spirit of progress apparent in the increasing demand for better conditions of life in towns, for improved systems of sanitation, for stricter control of food and water supplies, and generally for the amenities of modern life, though instances are not lacking to show that this is combined with an easy toleration of bad roads and insanitary surroundings which closer supervision could remedy at a small cost.

Sixty-one per cent. of the total income of municipalities, excluding loans and grants from Government, was derived from octroi. The question of the substitution of terminal taxation for octroi made some advance and it was actually introduced in one town and is under consideration in four other cases. The effect of the war on octroi was to be seen in various directions. There was a general falling off in gross receipts involving a proportionate rise in the cost of collection. In certain cases the re-export from distributing centres like Lahore and Amritsar by foreign goods merchants able to take advantage of stocks on their hands, necessitated refunds out of all proportion to the income derived from fresh imports.

The improvement of urban sanitation continues to rank in the forefront of municipal activities. The appointment of duly qualified Health Officers, paid in whole or in part by Government, and of Sanitary Inspectors, upon which Government insisted last year, has in most cases been carried out. The subject of town-planning received considerable attention during the year, and a special committee reported on the question. Its findings were, with certain modifications accepted by Government and have been circulated as the advice of a body of experts requiring due consideration when town-planning proposals are under discussion.

AGRICULTURE, WEATHER AND CROPS.

Agricultural Department.

26. During the year under report the scale of pay of the Agricultural and Research Assistants was considerably improved. The superior staff of the Department was also strengthened by the appointment of an Agricultural Engineer.

The change of syllabus at the Agricultural College and the improvement of the prospects of the students have had the desired effect, and a large increase took place in the number of applicants for admisson

to the College. Over 40 scholarships have been offered for sons of zamindars attending the short vernacular course, which is proving most successful. The College is thus providing not only for students seeking subsequent employment in the Department, but also for others who will apply the knowledge gained to their own affairs.

The results of experimental cultivation at the various stations were to a great extent vitiated by the abnormal character of the seasons. Confirmation of the view that it is uneconomical to employ artificial manures in the Punjab was, however, obtained, and the superiority of Punjab 11 wheat was again demonstrated. The experiments conducted at Narwala for the reclamation of alkali land have proved successful: the methods adopted were deep cultivation combined with surface flooding and lateral drainage, and a very fine yield of wheat was obtained from land so treated. The work of the Economic Botanist in the selection of acclimatized American cottons is a most promising feature of the Department's activities. The results achieved already are valuable, and the prices realised for cotton grown from seed distributed by the Department prove the value of the service rendered to the Punjab cultivator by the introduction of these acclimatized American varieties. The number of wells bored was not so great as in the previous year, and the percentage of successes was only slightly higher, but the report of the newly appointed Agricultural Engineer shows that the matter is receiving careful consideration, and a great improvement may be expected with the treatment of the subject on proper scientific lines. With regard to the minor activities of the Department it is satisfactory to note the progress of sericulture, and the promising start made in apiculture. The cultivation of olives, with which however the Agricultural Department is not at present concerned, is still only in an infant stage, but interesting developments may be expected if the proposals now under the consideration of Government for the lease of certain rakhs in the Jhelum and Attock Districts to a private company for olive cultivation mature.

Veterinary Department.

27. The activities of the Veterinary Department are yearly more and more appreciated by the public. Each report shows an increase in the number of veterinary hospitals, patients treated, castrations performed, and inoculations effected, and of bulls, rams and donkeys issued from the Hissar Farm for breeding purposes. The new College and Hospital have now been completed, and with the large and well-equipped buildings, and the well-planned and spacious grounds now provided, the Lahore College will afford facilities for veterinary training and treatment unsurpassed in India. Excellent progress continues to be made in cattle-breeding, and the people show an increasing tendency to act on the advice of officers of the Department. Sheep-breeding is growing in popularity and the demand for three-quarter bred merino sheep is spreading. The work of the Department was to some extent hindered by the withdrawal of 27 Veterinary Assistants to military service, and by the prevalence of glanders. This disease was particularly virulent in Lahore and Amritsar, but was successfully checked by the energetic and resourceful measures taken by the Chief Superintendent and his staff. The Hissar Cattle Farm

suffered from severe outbreaks of rinderpest and hæmorrhagic septicæmia, but the total receipts and the value of stock increased considerably. The appointment of the Camel Specialist has now been made permanent. By the cure of 98 surra-infected camels it is estimated that a saving of Rs. 13,000 was effected, as the animals would otherwise have had to be destroyed.

Fisheries.

28. The Fisheries Department has helped to draw up Fisheries Regulations for the Suket and Mandi States and has submitted proposals for licensing the fisheries in Kangra and Gurdaspur which will, in conjunction with these regulations, bring the spawning grounds of the Upper Beas under a uniform system of protection. Experiments on the scientific side have been continued with some measure of success, but this work is still in its infancy with the exception of the acclimatisation of trout in Kulu, which is a proved success. There is reason to hope that the Department will fulfil its object in conserving the supply of fresh water fish in the Province.

Co-operative Credit Societies.

29. The adverse conditions which co-operation had to face in 1913-14 were aggravated in the year under report by financial stringency arising from the war, and it is therefore not surprising that the number of societies remained practically the same as in the previous year. The Registrar and his staff were fully occupied in keeping existing societies afloat, and registration was allowed of only 70 new societies that required no financial support on being launched. The number of members has slightly decreased, and the increase of the working capital by about 7¼ lakhs only was comparatively small. It was for some reasons not undesirable that a halt should be called in the progress of the movement, pending the results of the investigation of the Committee on Co-operation, and the opportunity will now be taken for improving the organization and the financial stability of the societies in the light of the Committee's recommendations.

The cost of the societies to Government was the same as in the previous year ; but a considerable increase in the subordinate inspecting staff was made possible by the institution of a system of contributions from societies to meet the expense of audit, which received the provisional sanction of Government.

The data for the year confirm the view that the insignificance of their reserves and the low proportion of working capital contributed by the members themselves constitute a potential weakness in the position of Central Societies. These Societies were indeed able to meet their obligations, but were unable, without endangering their own financial stability, to perform the very function for which they are intended, and in a year in which primary societies had particular need of their assistance they were able to advance only 6 lakhs as against 15 lakhs in the previous year, while in the case of 5 societies Government actually had to come to their help. Measures have already been taken by the Registrar to induce Central Societies to increase their reserves, and it is to an increase of fluid resources rather than to any hope of guarantees by Government that Central Societies must look for their future financial stability. The absence of large fluid resources and of a co-ordinated system of borrowing from Central Banks was, simi-

larly, a noticeable defect in the case of agricultural primary societies; on the other hand the marked and increasing degree to which their working capital consists of the members' own money has been a great source of strength in dealing with the withdrawal of deposits.

With the exception of the weavers' societies, which were severely affected by the prevailing financial depression and the rise in the price of dyes, the non-agricultural societies are all prospering, and it is hoped that when more normal conditions are restored there will be a considerable expansion in this direction.

30. The rainfall in the Province except in the south-east dry area was above normal in February, April and May 1914, and together with an early monsoon resulted in conditions favourable for sowing. Precipitation was heavy in July and in the middle of September. On the whole the monsoon was favourably distributed. Winter disturbances appearing unusually early gave abnormally heavy rain in October and November, doing damage to cotton and autumn cereals. Heavy and widespread rain also fell in the middle of February and in the second week of March. The latter did however more harm than good to the rabi crops, of which the outturn was in many districts quite disappointing.

Crops and Prices.

31. Thanks to the favourable climatic conditions and the stimulus given by high prices owing to the war the sown and matured areas represent the high water mark reached in the Province. This is particularly noticeable in the case of wheat which benefited in addition by the contraction in the area put under cotton. The high prices obtainable for this crop did much to atone for the slump in the price of cotton and the dearness of the coarser food-grains.

Forests.

Forest Department.

32. During the year there was a net reduction of 76·70 miles in the area under the control of the Forest Department, due mainly to the transfer of 52,000 acres of Protected Forest in Kangra to the charge of the Deputy Commissioner. This measure was sanctioned partly in order to enable the Forest Department to concentrate attention on the more valuable forests, but chiefly with a view to associating the people themselves with the management of the forests and inducing them to realise the damage caused by excessive grazing and browsing, and so to supply the remedy themselves. The scheme for taxing buffaloes in these forests has been postponed; the tax on sheep and goats was, however, confirmed, and in the case of the latter the rate will be considerably enhanced if the desired reduction in the number of these animals is not effected within two years. The vexed and complicated question of rights in trees on uncultivated and waste lands in the Kangra District has been under examination, and the lines laid down on which the rights of Government and of private owners are to be decided. The general question of assisting natural reproduction by the adoption of more rational methods of management is receiving considerable attention, and in this respect the new working plan of the Murree and Kahuta forests marks an important advance. Thinnings are now, thanks to the provision of a better trained staff, dealt with more scientifically.

Schemes for the formation of irrigated plantations are almost complete. The principal areas comprise 19,290 acres at Khanewal, 11,680 acres at Chichawatni and 10,000 acres at Pir Mahal, and 7,500 acres in

the Gujrat District. It is expected that when fully matured the new plantations will produce a net income of about Rs. 12 lakhs.

The number of forest offences fell from 11,951 to 9,736, but the apparent improvement seems to be due to causes of an accidental or temporary nature, and was set off by a deplorable outbreak of incendiarism in the Rawalpindi and Kangra Divisions, a form of infectious madness which even the severest punitive measures are inadequate to stamp out.

The amount of timber extracted was 6 lakhs of cubic feet, and the quantity of fuel 11 million cubic feet in excess of the figures for the previous year. In the latter case, however, the increase is almost entirely due to the inclusion in the returns for the first time of fuel removed by Kangra rightholders. Recent reports indicate that departmental extraction will have to be resorted to on a larger scale, if full benefit is to be obtained from the rise in price of coniferous timbers.

The cash surplus has been growing steadily in recent years, and on the year's working amounted to Rs. 5,64,139, an increase of Rs. 1,32,360 on the previous year. The resin industry is proving a marked financial success.

Trade and Manufactures.

Industries.

33. The number of factories subject to inspection under the Act decreased from 224 to 201. Some improvement has been effected during the year in the sanitary conditions and ventilation of factories, and the employment of women and children for excessive hours is less common than it was owing to the success which attended the prosecutions instituted by the Inspector of Factories, and the warning and advice given by him to factory managers.

Over-production in the Lancashire cotton-spinning industry, together with depression caused by the war, and the reluctance of agriculturists to part with their produce at such low rates as prevailed, resulted in the cotton-ginning factories not working at full pressure. A similar slackness was experienced by the spinning mills, which have been working short time rather than lose their operatives.

Internal trade.

34. After two prosperous years the balance of trade remained against the Province, imports exceeding exports by 3½ crores. The decline in the value of imports, despite an increase in bulk, is to be attributed to the falling off in cotton piecegoods and refined sugar, which was not compensated for by heavy imports into the south-east of the inferior food-grains. The chief decrease in exports was in cotton, rapeseed and these inferior grains.

The decline in foreign piecegoods imported was due to excessively heavy imports in 1913, which synchronized with the banking crisis. Dearness of food-grains and the low prices obtainable for the cotton crop were other contributory causes. The closure of the continental sugar exports on the outbreak of the war and the diversion of the Java sugar crops to Europe account for the refined sugar statistics. The influence of the war is still more manifest in the case of exports. The net export of wheat advanced by 16 lakhs of maunds. On the other hand, with the foreign demand cut off, exports of raw cotton declined by 20 lakhs of maunds. Owing to high prices the value of the exports of

gram and pulse rose by Rs. 30 lakhs, in spite of a decrease of 15½ lakhs of maunds in bulk.

The stoppage of the issue of sovereigns from treasuries reduced the imports of gold coin and bullion by Rs. 161½ lakhs. Imports of silver coin, however, rose by no less than Rs. 527 lakhs, owing to free encashment of notes at treasuries and abnormal withdrawals of saving bank deposits in the excitement of the early days of the war.

External trade.

35. The total exports and imports both dropped by about 9½ thousand maunds in weight. The decline in value was Rs. 3½ lakhs in the case of the former and Rs. 2½ lakhs in the case of the latter. The trade with Central Asia registered at Leh is chiefly responsible for these differences.

In imports from Afghanistan the heaviest fall was in fruit and vegetables, ascribed to an unfavourable season in that country. The import of wool has practically ceased owing to the prohibition enforced by H. M. the Amir. The export of rice fell off by over 4,500 maunds owing to high prices of food-grains in India.

There was a decrease of 500 maunds in the amount of charas imported from Central Asia and of Rs. 2 lakhs in its value, owing to the inferiority of its quality and accumulation of stocks in the Punjab. Raw silk imports suffered from the poor quality of the Khotan crop. The general contraction of trade passing through Ladakh seems to be due to the fact that it waxes and wanes in alternate years, because traders make the double journey from the Punjab to Chinese Turkistan and back every second year. The principal men, either by design or coincidence, are generally to be found moving in the same direction in the same year. In the twelve months under review no well-known Hoshiarpur trader was on the road. Owing to the closure in August of the Russian Bank at Kashgar, traders were deprived of their usual means of making remittances, and were compelled to invest instead in charas and raw silk, unprofitable though the investments proved.

The most noteworthy point about the trade with Chinese Tibet was a drop of nearly Rs. 1 lakh in the value of wool imported, the cause of which is obscure. The rise of 18 per cent. in the value of exports is chiefly due to increased export of more expensive manufactured articles, such as brass and copper, cotton and woollen goods, &c.

Joint Stock Companies.

36. Apart from the financial stringency created by the war, the effects of the banking crisis of 1913 were still making themselves felt in the succeeding year. Only 6 new companies were registered, while no less than 52 collapsed. There were in addition 15 other companies which were at a standstill, but had not by the close of the year sent official intimation of their liquidation. A further cause which must not be left out of account is the working of the new Companies Act which, *inter alia*, put a stop to the farcical and highly pernicious system of reciprocal audit. The failure of so many companies is no doubt a serious blow to the industrial development of the Province, and for some time to come the course and extent of investments may be affected, but in the long run the present losses may prove to have been most beneficial, and will clear the way for the growth of sounder companies under more able

management. It is interesting to note, however, that while one-third of the companies limited by shares had to suspend business, not a single company limited by guarantee came to grief during this period.

It may safely be affirmed that the new Act has had a most wholesome effect. As regards audit, the full benefit has not yet been obtained, as it was thought inexpedient to interfere with appointments made for the year under report prior to the 1st April 1914. But even so a great improvement in the quality of the work is manifest and shareholders have now a fair opportunity of ascertaining the true position of affairs.

Public Works.

Public Works Department.

37. Liberal grants from Provincial Revenues were again made as in last year for public works, and the total expenditure though less than in 1913-14 was higher than in any previous year. The outlay on Imperial Military and Civil Works was considerably less than the average, and on the other hand the expenditure on Provincial Civil Works was the highest yet recorded.

Many large and handsome buildings have been erected in the Province chiefly at Lahore, and Police and Education again account for a large amount of the expenditure. Improved quarters for officials of the former department, chiefly for Inspectors and Sub-Inspectors, have been built at most of the district head-quarters, and large new High Schools of improved design, affording ample light and ventilation, have been constructed with boarding-houses attached at several places or are in course of erection.

Many improvements have been made in the main lines of communication chiefly in the matter of providing bridges over the large streams, and now out of the five Punjab rivers all except one, the Chenab, are provided with bridges for road traffic. Communication by road with the United Provinces will also be improved when the conversion of the old railway bridge over the Jumna near Saharanpur into a road bridge, the cost of which is to be shared between the two Governments, now being carried out by the Public Works Department of the United Provinces, is completed. Minor improvements have also been effected and arrangements made with the North-Western Railway for conveyance of stone metal at greatly reduced rates, so that it is probable stone will shortly replace kunkar,—which in many places is difficult to obtain and inferior in quality,—and give more lasting and durable roads.

The most important sanitary work in hand during the past year has been the Water Works at Sialkot,—the first town it is believed where tube wells are relied on as the source of supply,—but many minor town-Water Works and Drainage Schemes have been carried out.

Work has been retarded to a certain extent owing to the difficulty and enhanced cost of obtaining material of European manufacture, and the influence of the War is also felt in the personnel, as 8 out of a total strength of 24 Imperial Executive and Assistant Engineers have been transferred to military duty.

IRRIGATION.

Irrigation Department.

38. The direct receipts and expenditure of the Irrigation Department during the year were Rs. 2,54,30,527 and Rs. 1,77,54,953 respectively. Working expenses were about one crore. The total area irrigated was 8,963,041 acres, the highest on record, of which 543,155 were in Native States The profit for the year earned by Productive Major Works based on the total income, direct and indirect, but excluding interest on capital outlay, was 252 lakhs, as compared with 259 lakhs in 1913, representing a percentage on the capital outlay of 14·70 per cent The profit after paying interest charges was 11 35 per cent. The gross Imperial capital now invested in the Punjab Major Canals is over £15 millions sterling.

Construction work on the Triple Project drew nearly to a close. The Upper Chenab Canal was formally opened in 1912, but further construction was necessary and it was not until the year under report that the tail reach of the canal was finally completed and water passed into the Ravi at Balloki. The Lower Bari Doab Canal, opened in 1913, is, like the Upper Chenab, dependent for most of its supply on the Upper Jhelum Canal. Satisfactory progress was made during the year on the latter. A serious breach, which occurred in April, was quickly repaired, and a great advance was made with the head regulator and the difficult Mangla Cut.

The principal new projects under consideration during the year were the Naila Dam Scheme for conserving the waters of the Sutlej, the Sutlej Valley Project for utilizing the surplus water of that river, and the Haveli Weir Project for improving the semi-perennial canals of the Sidhnai series and the inundation canals of the Multan District, together with the irrigation of a large area in Jhang.

A special Drainage Division was also formed in March 1914 to investigate the complicated problems connected with closed drainages in the Karnal District, a question which has defied solution for the last 50 years. The experience gained on canals in other parts of the province shows that any project which excludes from its scope the improvement and upkeep of the entire drainage system within and on the outskirts of its irrigation limits is deficient in one of its essential aspects.

RAILWAYS.

North-Western Railway.

39. The length of open line on the North-Western Railway at the close of the year 1914-15 was 5,329 miles, and 158 miles were under construction or sanctioned for construction. The total capital outlay on the system now amounts to well over £ 60 millions sterling. The net earnings during 1914-15, in spite of the adverse conditions created by the war, amounted to over 3½ crores, giving a percentage of 3·78 on the capital. Some idea of the extent of the operations of this railway may be obtained from the fact that the total train mileage for the year was over 22 millions.

Progress was made with an important scheme for reorganising the Traffic Department, which will now be split up into two sections, a Transportation Department, to deal with transportation and passenger traffic, and a Commercial Department, to deal with the commercial side

of traffic, including rates and claims. The specialisation thus rendered possible will conduce not only to greater efficiency in the actual handling of traffic, but will also exercise, it is hoped, a very beneficial effect on the commercial development of the Province.

Revenue and Expenditure.

General. 40. The revenue raised in the Province amounted to Rs. 8,89,69,000 or Rs. 18,55,000 more than in the previous year. The increase is principally under the head of 'Land Revenue' ($15\frac{1}{8}$ lakhs) due in the main to increased sale-proceeds of waste lands, and 'Salt' ($8\frac{2}{5}$ lakhs), the sale of which rose by nearly 21 per cent. 'Miscellaneous,' 'Irrigation—Major Works' and 'Stamps' show decreases of rather less than 2 lakhs each.

The total expenditure for the year was Rs. 6,17,67,000 or Rs. 30,73,000 more than in 1913-14. This is mainly due to an increase of $14\frac{1}{2}$ lakhs under the head of 'Medical' accounted for by large grants to the King Edward Memorial Scheme and the Simla Municipality, and to the debiting to this head, instead of to Civil Works, of the grants to local bodies for sanitary works, and also to a rise of nearly 10 lakhs under 'Irrigation—Major Works,' chiefly on the Upper Chenab and Lower Bari Doab Canals. There were also increases of $3\frac{1}{2}$ lakhs under 'Law and Justice—Courts of Law' and $3\frac{3}{4}$ lakhs under 'Police.' On the other hand, there was a decrease of 6 lakhs under 'Civil Works' and nearly 3 lakhs under 'Education.'

Excise. 41. The Punjab Excise Act, which came into effect on the 1st of February 1914, has been in force throughout the year under review, but, though the courts, with certain exceptions, have made use of the enhanced powers conferred on them by the Act, the whole period was practically taken up in framing rules and re-issuing notifications (particularly those relating to the working of breweries and distilleries and the grant of licenses) enforcing it.

The salient features of the year are a general rise in the retail prices of all excisable articles; a general decrease in consumption, considerable in the case of liquor, and small in that of opium and intoxicating drugs; a slight reduction in the number of licenses; and a stationary revenue. The first two results are attributable chiefly to the influence of the war and, to a lesser degree, to the institution, during the cold weather, of an organised campaign against illicit distillation and smuggling in some of the central districts where the evil was believed to be extremely prevalent.

The total revenue brought to account during the year was Rs. 69,21,091, an increase of Rs. 7,000 on that of the year previous. The increase of Rs. 1,80,268 in the income from license fees, fixed some months before the war and which amounted to Rs. 21,15,828 against Rs. 19,35,556 in 1913-14, was more than counterbalanced by a considerable drop of Rs. 3,19,250 in the receipts from still-head duty, and the decrease in the issues of country spirit from 517,516 gallons in 1913-14 to 455,419 gallons in the current year.

The consumption of liquor, which within the Province shows a falling off of no less than 9 per cent., decreased in direct consequence

of the high prices of food stuffs and the increased cost of liquor, the effects of the war. An appreciable rise in the price of *gur* and molasses and the cessation in the rate-cutting contest between distillers led to an increase in wholesale prices to meet which, and also to cover themselves against loss on their enhanced vend license fees, retail-vendors put up their prices considerably. The discontinuance of the grant of special licenses for retail vend at certain fairs in some districts and the closing of liquor shops during others should tend to diminish the temptations to excesses at religious and festive gatherings. The number of retail licenses for the sale of country spirits which were reduced in 1913-14 to 766 has in the present year been brought down to 748; this is no more than one to every 133 square miles of territory and 26,000 of population, and is lower, relatively to area and population, than in any other part of India.

There was a decrease of about 4,000 seers in the recorded consumption of opium of all kinds during the year; that of *charas* and *bhang* also fell, the former by about 100 seers and the latter by some 3,000 seers. Though the licenses for sale of cocaine fell from 64 to 54, there was an increase of 267 grains in the sales to the public in the Lahore and Simla Districts. The excise staff have met with considerable success in detecting smuggling, but these results confirm the opinion that illicit trade in cocaine is prevalent in a great part of the Province.

Income tax.

42. The collections on account of this year's assessment rose from Rs. 16,80 to Rs. 17,48 thousands, an increase of 4 per cent. This is less than half the rate of increase in the preceding triennium, and reflects the adverse conditions of the year 1913-14, a period of less than normal agricultural prosperity, which was marked, in addition, by a series of commercial failures. If Banking and Insurance companies have decreased in consequence, the financial crisis has not been without its beneficial results in the stimulus given to industrial concerns, which have more than doubled in number, and were responsible for an almost similar increase in assessment.

A matter which appears to have been somewhat neglected hitherto is the realisation of income tax on the interest of securities other than securities of the Government of India: steps are now being taken to remedy this. The group system of assessment was given a trial in several districts, but without any very pronounced success. It is too early, however, to condemn it as a failure. Proposals are being made for the extension of the system of special assessment in the larger towns. There is much to be said for the employment of an expert agency capable of working on broader and more scientific lines than the ordinary district staff.

Stamps.

43. Stamp revenue decreased by 1·86 lakhs, chiefly on account of the war and the late banking crisis. Among the subjects which received special attention during the year were the checking by Excise Inspectors of stamp-vendor's registers, and the devising of measures to prevent insufficient stamping of documents.

Vital Statistics.

Public Health.

44. The Province was again fortunate in having a healthy year, though the slight excess of rainfall during the monsoon and the early

commencement of the winter rains rendered conditions favourable for flea breeding, and led to a recrudescence of plague, the full effect of which was not experienced till after the close of the year. Until the outbreak of the war the prices of food-grains were not abnormally high, and they remained at a reasonable level till September. At the end of that month, however, the increased demand from Europe, coupled with the depletion of stocks in the Punjab, caused a sharp rise, and at the end of November the retail price of wheat at Lahore was 8 seers per rupee.

There was a further very satisfactory rise in the birth rate which amounted to 46·3 on the figures of the 1911 census and to 43·8 on those figures when modified by the addition of births and subtraction of deaths. The rise in the birth rate in 1914 is to be attributed largely to the comparative immunity of the province since 1908 from severe malaria epidemics, and the consequent greater healthiness of the child-bearing population. The death rate of the province rose slightly from 30·2 to 32·0 *per mille*, and was 0·9 in excess of the quinquennial average. It is, however, gratifying to note that infant mortality was substantially less than last year, there being a decrease of 8·63 in the case of males and 4·75 in that of females.

Cholera was both more widespread and more severe than in the previous year, and accounted for 3,993 deaths in rural circles and 2,663 in towns. Every effort was made to deal with the disease, but prompt action is rendered difficult by the frequent delays in the reporting of first cases. New rules on this subject have recently been framed making the village watchman responsible for the immediate report to the nearest thana of the first case of cholera in his beat, whilst the lambardar will at the same time report at once to the nearest dispensary, so that immediate measures may be taken by the medical officer in charge.

Mortality from small pox was low, only 2,900 deaths occurring from this disease, but, owing probably to the heavy rain in September, the number of deaths from "fevers" rose again from 331,698 to 345,501, representing a death rate of 17·87 *per mille*, more than half the total provincial death rate. No great value can, however, be attached to the figures, as in common parlance the term "fever" is used frequently to cover cases of death from ordinary causes and cases for which no convenient explanation is readily forthcoming.

Plague was considerably more severe than in the two preceding years, and more deaths from this disease occurred in the month of April alone than in the whole of the year 1913. The legacy left over to the year 1915, in consequence of the monsoon conditions of 1914 being so favourable to the disease, is clear from the following figures showing the mortality from plague in the first four months of 1915:—January 15,559, February 29,357, March 55,637, April 88,403. The city of Rawalpindi is said to be responsible for the dissemination of plague through the north-west of the Province, and it is to be hoped that the municipal committee will do their best to remove this stigma on their administration. Plague is a disease of the home, and its prevention, which is largely a matter of keeping the house clean, depends mainly on the women. The ultimate solution of the plague problem seems to be the

education of women in domestic hygiene, and efforts are being made in this direction by the Chief Plague Medical Officer.

Sanitation.

45. Continued activity has been shown in the direction of sanitary reform, to which a stimulus has been given by the recent resolution of the Government of India and those of the Local Government. The greater part of the measures suggested by the Government of India are still under consideration, but in accordance with their recommendation the authority of the Sanitary Board has already been increased, power having been delegated to the Board to give administrative sanction to all sanitary projects, the estimated cost of which does not exceed one lakh.

The actual sums distributed by the Sanitary Board amounted to Rs. 2,17,791 out of the urban and Rs. 9,564 of the rural grant. In addition direct grants were given by Government in aid of various urban schemes amounting to Rs. 3,11,859. The disparity indicated above between the amount of grants for urban and rural schemes is partly due to the fact that it has been ruled that in ordinary circumstances the contribution from general revenues to sanitary projects shall be limited to half the cost of each work, and that the balance must be provided from local sources. In towns the advantages of sanitary reforms are being increasingly recognized by the citizens, and they are more ready to contribute their share of the cost. Government is, moreover, ready to assist them, as far as funds are available, with loans at a low rate of interest. In villages the need for reform is not so generally felt and local taxation is unpopular, while the District Boards have many other claims on their resources. Measures are now under consideration for placing the finances of District Boards on a more satisfactory footing, and it is hoped that they will soon be in a position to devote as much attention to the improvement of the sanitary surroundings of the rural population as to other objects under their control. But no rapid progress can be expected until the villagers have learnt to appreciate the value of sanitation.

Medical Relief.

Dispensaries.

46. The number of dispensaries in the province was 467, an increase of one. The total expenditure on dispensaries rose from Rs. 12,89,385 to Rs. 13,66,404, the increase being mainly under the heads of establishment and medicines, and it is satisfactory to note that the contributions from Government, municipalities and local bodies all show an increase. The heavy calls made on the public by the war account for a slight drop in private subscriptions. The number of dispensaries is, however, still inadequate in many districts, and enquiries are being made as to the possibility of increasing their number.

Owing to the prevalence of plague and malaria the number of patients treated rose from 4,591,177 to 4,867,385, of whom 4,778,611 were out-patients. As usual the largest number of patients requiring treatment are those suffering from diseases of the eye. Patients of this class form roughly one-third of the indoor and one-fifth of the outdoor patients. Operative surgery continues to flourish, and both in selected and other operations the figures for the year exhibit a substantial increase.

A satisfactory feature of the returns is the increase in the female attendance at dispensaries both as indoor and outdoor patients. This increase in popularity is general and not confined to any particular class of the community. The best guarantee of a continuance of this satisfactory condition of affairs lies in continued attention to the important matter of the separate treatment of men and women in dispensaries. Most of the separate hospitals for women are maintained by missionary bodies with the assistance of grants-in-aid. A number of local fund hospitals, however, have female Sub-Assistant Surgeons for the treatment of female patients, and it is hoped that in future more women educated at the Women's School of Medicine, Ludhiana, will be available for this work. The present uncertainty of employment and prospects, however, discourage recruitment among women for the medical profession. Some improvement may be effected by the constitution of the women's medical service in India under the auspices of the Dufferin Fund Committee, but it is probable that the next material step in advance lies either in the creation of direct service for women under Government or in the exercise of control by Government over local bodies in respect of the appointment and dismissal of female subassistant surgeons entering their service.

The number of medical officers available for civil duty was greatly reduced owing to the demand for officers for military duty, but the Department continued to carry out its duties with zeal and efficiency.

EDUCATION.

General.

47. A marked advance has been made by education in the Province during the year, and the number of scholars and pupils increased to 445,909, but if a wider survey of educational progress be taken, and comparison be made with the position 10 years ago, the striking fact emerges that the numbers under instruction have risen by 66 per cent. during that period. The proportion of boys of school-going age who receive instruction has in the same period increased from less than 15 to over 23 per cent. and that of girls from 2·3 to 4·8 per cent. There is no doubt much still to be done, but the above figures show clearly enough the immense improvement in the position of education in the Punjab.

Expenditure.

48. This change has involved a large increase in the expenditure of public money on educational needs, and the total sum so expended has risen by over 125 per cent. during the same term of years, *viz.*, from 31·46 lakhs in 1905-06 to 71·24 lakhs in 1914-15. The provision of new or improved buildings must continue for some time to be one of the main objects of expenditure, and a noticeable feature of the year's history is the considerable increase—one of over 7 lakhs—in such expenditure. Besides the new Biological Laboratory at the Government College, Lahore, completed at a cost of nearly 2 lakhs, there were no less than 475 school buildings erected or in course of erection during the year. In the case of secondary schools there is a steady improvement in the buildings and hostel accommodation not only of Government but of aided institutions. It is to be feared, however, that in the case of primary schools the type of building selected is not

always the most economical or most suitable, and it is time that some simple standard form of building was devised for the guidance of local bodies in rural areas.

Teaching Staff.

49. The returns showing the number and qualifications of teachers do not go back before 1911-12, but they show that in the four years which have passed since then the number of teachers maintained has risen from 10,856 to 14,356, and much has been done to improve their quality, the percentage of trained teachers having in the interval risen from 46 to 52, and the number of teachers with degrees from 490 to 676. The demand for training is now intense, and the number of candidates for admission to training institutions of all classes far exceeds the facilities available. The defects of the existing system of training are realized by the Department, and there are signs that the tone maintained in the teaching institutions is improving, and that the profession of teaching is now securing, if not the same, at least something approaching the estimation and the dignity attached to it in more advanced countries. The teachers themselves are approaching their duties with a greater sense of their responsibilities, but the average teacher, both in primary and in secondary institutions, still falls considerably short of the ideal, and while over half the teachers in the former and over one-third in the latter remain untrained it is obvious that the system of instruction must continue to be seriously defective.

Secondary Education.

50. It is in the secondary institutions, however, that the defects of the present class of teachers are most felt. The constant increase in the number of the institutions and the further demand for secondary education are most gratifying. The dangers of too rapid development are, however, fully appreciated by Government, and while they are partly a consequence of the educational system, they are also largely connected with the inability to procure a sufficient number of masters of the standard required : men who will place the general interests of their schools before those of the matriculation class, who, by resisting the migratory propensities of their assistants and their pupils, will ensure for their schools a corporate and individual character, and who by strict discipline and the maintenance of high standards will prevent their institutions from degenerating into mere teaching machines.

Collegiate Education.

51. The Government College completed its fiftieth year of existence during the year under review, and that institution is to be congratulated on its record of half a century of valuable and distinguished work. In the history of professional and technical institutions the three most prominent features of the year are the completion of the new buildings of the Veterinary College, already described elsewhere, the inauguration of a new system of instruction in the Agricultural College, and the unfortunate troubles at the Lahore Medical School. The Agricultural College has introduced a four-years' course in two parts, and with this salutary change previous difficulties in recruiting students have now disappeared. The complaints of students at the Medical School were the subject of investigation by a special committee, and after due enquiry it was found necessary to strike off the names of 90 students for insubordination.

Technical Education.

52. An Advisory Committee on industrial and technical education has recently been constituted, and it is to be hoped that it will be able

to define more precisely than is at present the case the objects at which industrial education in this Province should aim. The curriculum in schools of this class is often too minutely sub-divided, with a resulting waste of teaching power.

Female Education.

53. The number of girls at school is now 64,815 or more than double the figures in 1905-06. The number of girls' schools increased during the year from 831 to 919, and while the demand for higher female education still continues strong, the importance of primary and infant teaching has not been neglected.

European Education.

54. The European Schools of the Punjab are steadily improving and playing their part well in the present crisis. They are well represented in the various ranks of the army, and not a few *ex*-pupils have already fallen.

Muhammadan Education.

55. The whole question of improving Muhammadan education has been recently under discussion in consultation with the leaders of the community, and the matter is still under the consideration of Government.

Literature and the Press.

56. The number of books registered rose to 2,221, the highest on record. The increase in output was not, however, accompanied by any corresponding improvement in literary quality. Verse, as usual, took the leading place. It is chiefly used as a medium for advice on matters social, moral and economical. After poetry, religion forms the subject of the largest number of publications. Religious controversy, it is to be regretted, shows no signs of abatement. The novel is being employed increasingly to express social evils. The popularity of biography is growing and progress in history was marked by three or four books of real merit.

The number of newspapers and periodicals in existence at the close of the year was 224 or 35 more than at the beginning. The war brought about a large extension of newspaper circulation towards the end of the year, and became naturally the main topic of discussion. Controversial subjects were at once dropped, and prompt assurances given of India's fidelity to the Throne. Great enthusiasm was expressed at the decision to employ Indian troops in Europe. The executive orders, which became necessary on the outbreak of the war, were on the whole well received as being inevitable, though criticised by some as hardly called for in view of the loyalty shown by all classes. Apart from one or two cases of the circulation of sensational rumours, which necessitated action under the Press Act, the general attitude of the Press towards the war was satisfactory. Other subjects, which at one time or another took a more or less prominent place, were Gurdit Singh's unfortunate enterprise undertaken in order to test the validity of the Canadian Immigration Laws, the Contempt Bill, and the strike at the Lahore Medical College, the Hindu University scheme, the Public Services Commission and the Secretary of State's Council. A controversy between the Aryas and the Sikhs on the question of *niyog* led to a certain amount of obscene writing calling for official warnings.

The securities of three presses, the *Zamindar* Press, Lahore, the *Khalsa* Press, Lyallpur, and the *Loyal Gazette* Press, Lahore, were forfeited, and warnings issued on various grounds to fourteen other newspapers.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Survey and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

1. Sir Michael O'Dwyer, K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report. **Personnel.**

2. The scheme for the reorganisation of the Civil Courts of the Province and their assimilation to the system in force in the Regulation Provinces came into effect on August 1, 1914. Another matter affecting the judicial administration was the appointment of a third Temporary Additional Judge of the Chief Court for six months of the cold weather, in order to enable a more systematic inspection of subordinate courts to be undertaken. The outbreak of the war necessitated the strengthening of the Secretariat, and an officer was placed on special duty for this purpose in September, and is now entitled Additional Secretary to Government. **General.**

8.—Relations with Tributary States and Frontier Affairs.

I.—PHULKIAN STATES.

3. Lieutenant-Colonel B. E. M. Gurdon, C.I.E., D.S.O., remained Political Agent of the Phulkian States throughout the year.

PATIALA.

Area, 5,412 square miles; population, 1,407,659; approximate revenue, Rs. 90 lakhs; army and police, 5,267; Chief, Sir Bhupendra Singh, G.C.I.E., Sidhu Jat; aged 24; has a male heir; title, Maharaja; salute, 17 guns.

4. His Highness the Maharaja enjoyed excellent health till October 1914 when he was attacked by an acute form of nephritis while on his way to the front in France with General Remington's staff. It weakened him considerably, but he has now quite recovered and is looking well and strong. His Highness spent a part of the summer in Chail, leaving only when it was necessary for him to make preparations for his departure for the front. **Personal.**

5. On the declaration of war with Germany, His Highness most patriotically placed his individual services and all the resources of his State unreservedly at the disposal of His Majesty the King Emperor. The Lieutenant-Governor telegraphed to His Highness as follows:—"Much appreciate your Highness' patriotic offer to place your troops, your resources and yourself at the disposal of the Empire at this crisis. Your Highness' offer, which I have transmitted to the Government of India, is in every way worthy of the high traditions of the Patiala State." This offer, among the first in India, was a wholly spontaneous one on the part of the Maharaja. The Government of India decided to utilise the services **The War.**

PHYSICAL AND POLITICAL GEOGRAPHY.

of the Rajindar Sikhs (Infantry) and the Rajindar Lancers at the front. His Highness pressed to be allowed to serve personally and Government agreed. His Majesty the King Emperor was graciously pleased to appoint His Highness an Honorary Lieutenant-Colonel in the Army. As it was not known for what length of time His Highness might be absent from his State, arrangements were made, with the approval of His Honour the Lieutenant-Governor, for the carrying on of the administration. His Highness gave full authority to his Secretaries to deal with all but really important cases, which were to be held over till he could himself attend to them. The Political Agent was to be consulted on all points of any importance before final orders were passed. His Highness sailed from Bombay on the 16th October 1914, but the attack of nephritis, referred to above, prevented his going to Europe, and he was put ashore at Aden and returned to India under medical advice. The State Imperial Service Lancers and 8 companies of Imperial Service Infantry sailed for Egypt in October 1914.

6. His Highness, in conjunction with other Ruling Chiefs of India, has subscribed to the movement for providing the Hospital Ship "Loyalty." The State has given material help in the matter of the supply of recruits to the Indian Army. His Highness made a tour of his State in January and the early part of February for this purpose, and succeeded in obtaining 353 men, of whom 211 have been accepted by the Military authorities. With a view to co-operation with Government, His Highness issued notifications on the lines of the following Ordinances of the Government of India: Ordinances Nos. I, V and VI of 1914, and the Foreigners' Ordinance, 1914.

Irrigation.

7. The area irrigated by canals in 1914-15 was as follows:—

			Revenue.
Sirhind Canal	Acres.	379,215	Rs. 16,60,462
Sirsa Branch, Western Jumna Canal	„	69,812	„ 2,81,909
Banur and Inundation Canals ...	„	7,162	„ 15,096
Total area and revenue ...	„	456,189	„ 19,57,467

8. There was a good and opportune rainfall throughout the greater part of the year. The demand for water in the early part of the kharif was rather small, but more water was taken during the latter part of August and the beginning of September, and the result has been, on the whole, good. The kharif irrigation exceeded that of all previous years. Throughout the rabi the rains were good and there was a very small demand for canal water. The question of the distribution of the Ghaggar river water, at the head of the Banur Canal, regarding which the Darbar complained last year, has not yet been settled. The Choa Branch of the Karhali Rajbaha of the Sirhind Canal has been completed and has been opened for irrigation during kharif 1972. All the canals were properly maintained.

Crops.

9. The rabi crops were sown in time, but the yield was less than was expected for want of rain. Again, owing to heavy rains at threshing time, the corn was reported to have been seriously damaged in some parts of the State. The sowing of the kharif commenced betimes, but owing to excessive rainfall the outturn was restricted, and did not come up to expectations.

The total area under cultivation was 4,084,973 acres and the produce amounted to 38,302,817 maunds. There was a scarcity of fodder during the rabi, but fodder was plentiful later in the year.

JIND.

Area, 1,259 square miles; population, 271,728; approximate revenue, Rs. 22 lakhs; army and police, 1,716; Chief, Sir Ranbir Singh, K.C.S.I., Sidhu Jat; aged 36; has no male heir; title, Maharaja; salute, 11 guns.

Personal.

10. His Highness the Maharaja on the whole kept very good health throughout the year under report. He has continued to take a keen interest in his favourite pastimes of fishing and shooting, paying visits to the Central Provinces and the Kalsia State for this purpose.

11. There have been no changes in the personnel and the general administration of the State has been maintained at a high level.

Administration.

12. His Highness, with characteristic loyalty, placed all the resources of the State at the disposal of the Government of India on the outbreak of the European War. His Excellency the Viceroy was pleased to accept Rs. 2,00,000 as the Maharaja's contribution towards the expenses of the War. In addition to this, His Highness gave Rs. 25,000 towards the Indian Relief Fund; Rs. 7,500 to the Prince of Wales' Relief Fund; Rs. 2,000 to the Red Cross Fund; 3 ambulance cars, valued at Rs. 12,525 each; and 114 Cavalry horses. The Government of India also accepted the offer of the services of the State Imperial Service Infantry and 4 Companies were sent to East Africa, where they have done good work. Sardar Natha Singh, Bakhshi of the State Forces, went as Commandant of the Contingent, with Sardar Baldeo Singh, son of Sardar Bahadur Sardar Shamsher Singh, C.I.E., Chief Minister of the State, as second-in-command. The detachment has lost heavily in killed and wounded. Many of the wounded have returned to the State, and each party has been given an ovation on its arrival at Sangrur, where the men are made comfortable till they can move to their homes on sick leave. The Maharaja has generously ordered that each wounded man, according to his rank, is to receive a grant of money before returning to his home, and he has further decided that, as the Imperial Indian Relief Fund has numerous calls upon it, relief will be granted to the relatives and dependants of the killed or maimed of the detachment from the State Treasury. In all matters concerning the War His Highness has acted most generously.

The War.

Agriculture.

13. In the early part of the year under report the weather conditions adversely affected the kharif outturn, though rain fell from time to time. As a consequence, the yield of jowar, bajra, moth, mung and sugarcane was very poor. Prices in the State, as was the case throughout India, rose as a result of these unfavourable weather conditions and the outbreak of the European war. During this season several villages of the Dadri district were visited by swarms of locusts, but as prompt measures were taken to destroy them, little damage was done to the crops. The kharif sowings exceeded the average of the past five years by 12·07 per cent. Good rains at the beginning of the season permitted the sowing of an extensive area for the rabi crop of 1915. The area under cultivation was 39·61 per cent. above the average of the past five years. Fodder was sometimes scarce, but not to such an extent as to cause anxiety. The rabi crop was a very good one and is expected to yield about 24·44 per cent. above the average. The total revenue demand for the year was practically recovered.

Public Works.

14. The construction of the Jind-Panipat line of railway is progressing rapidly. A survey of a part of the Dadri *Ilaqa* was completed at a cost of Rs. 7,875.

Miscellaneous.

15. Last year there were 49 co-operative credit societies in the State. This year three new ones were started. The capital at the disposal of these societies has risen from Rs. 82,216 to Rs. 98,023. The societies have done much to increase the prosperity of the agriculturists.

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 19 lakhs; army and police, 1,591; Chief, Ripudaman Singh, Sidhu Jat; aged 32; has no male heir; title, Maharaja; salute, 11 guns.

Personal.

16. His Highness the Maharaja spent the greater part of the hot weather at Mussoorie and Dera Dun as in the previous year. He still leads a very retired life.

Administration.

17. There is nothing to record again this year regarding the administration of the State which continues to follow the traditional methods. In August the Maharaja engaged Sir P. C. Chatterjee, late a Judge of the Chief Court, Punjab, as his Chief Minister, for a period of one year. Very few of the more responsible posts are held by Sikhs.

PHYSICAL AND POLITICAL GEOGRAPHY.

II.—STATES OF THE BAHAWALPUR AGENCY.

18. Major A. J. O'Brien, C.I.E., held charge of the Bahawalpur Agency from the 1st April to the 19th October 1914 and Major A. C. Elliott, I. A., during the rest of the year under report.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 41 lakhs; army and police, 2,006; Chief, Sadiq Muhammad Khan, Abbasi, V, Daudputra; aged 10; title, Nawab; salute, 17 guns.

Personal.

19. His Highness the Nawab, who is now 10 years of age, returned from England about the middle of December in charge of Mr. C. H. Atkins, I.C.S., much improved in health and general culture. Mr. Atkins made over charge of the Nawab to Mr. E. M. Atkinson who had been appointed Tutor. After a short stay at Dera Nawab, with a visit at Christmas time to Bahawalpur, and followed, after his return to Dera Nawab, by a trip to Derawar Fort and another to Jajja to meet His Honour the Lieutenant-Governor, His Highness left the State in charge of his Tutor and Maulvi Ghulam Hussain, Assistant Tutor, to join the Aitchison Chiefs' College at Lahore where he was admitted into the 2nd form and is reported to be doing well as regards both studies and health.

Administration.

20. The State continued to be administered successfully by the Council of Regency. Nawab Malik Talib Mehdi Khan, Extra Assistant Commissioner, Revenue Member, took 2½ months' privilege leave with effect from 10th March 1915, and Khan Bahadur Mirza Sultan Ahmad, Extra Assistant Commissioner, who has previously officiated, carried on his work during his absence.

The War.

21. The Imperial Service Camel Corps, Escort and Baggage Corps are as efficient as ever. Immediately on the outbreak of hostilities in Europe the Darbar loyally offered all its troops for service abroad. Half of the escort of the Imperial Service Camel Corps was accepted for duty in the first instance and sent to Egypt. Later on the other half with camels was sent to Basra. 110 camels of the Baggage Corps, with their retinue, under the command of a Risaldar, are at Mombassa. The Darbar generously contributed Rs. 50,000 to the Indian Relief Fund and Rs. 27,000 were subscribed by officials and subjects of the State towards the same fund.

Crops and collection of revenue.

22. The rainfall was good throughout the State and especially heavy in the Minchinabad District. The rabi crop was good, but the kharif suffered from unusual floods. It was owing to the damage caused by these floods that large remissions and suspensions were granted, and that the revenue collections are short by about a lakhand-a-half. Notwithstanding this the revenue collections were good, as nearly all the budgetted amounts were realized.

Irrigation.

23. All the canals carried a good supply during the rainy season. Some important canals failed at the end owing to breaches caused by heavy floods. The *Chakbandi* system has not yet been completed. No new canal was undertaken during the year, as the whole attention of the State was devoted to the improvement of the old canals and to carrying out investigations for a perennial canal project. The Darbar's second representation in this connection is now under consideration by the Government of India.

MALER KOTLA.

Area, 167 square miles; population, 17,144; approximate revenue, Rs. 10 lakhs; army and police, 561; Chief, Sir Muhammad Ahmad Ali, Khan Bahadur, K.C.S.I., Pathan; aged 34; has a male heir; title, Nawab; salute, 11 guns.

Personal.

24. The health of His Highness the Nawab and members of his family was good during the year. In the summer His Highness visited Simla and Mashobra, and while at the former place paid informal visits to His Excellency the Viceroy, His Honour the Lieutenant-Governor and His Excellency the Commander-in-Chief. In April His Highness was nominated as a Member of the Managing Committee and Visitor of the Chiefs' College, Lahore. The Sahibzada and his brothers are being educated by Mr. Wakefield, their tutor, and are looked after by Miss Allsop, their governess.

25. There is again no change to report in the administration, which is satisfactory. In August last on the termination of settlement operations, Khan Sahib Chaudhri Muhammad Din, Extra Assistant Commissioner, proceeded on furlough. **Administration.**

26. His Highness generously contributed Rs. 4,000 towards the Imperial Indian Relief Fund and Rs. 1,000 towards the Prince of Wales' Fund. A sum of Rs. 10,000, subscribed by the subjects of the State, has been credited to the Imperial Indian Relief Fund and further subscriptions are being collected. His Highness further made a donation of Rs. 40,000 as a contribution towards the expenses of the Indian Expeditionary Force. **The War.**

27. The Police work during the year has been successful and especially so in a big dacoity known as the Jhuner dacoity case, in which 7 men were arrested and made over to Government for trial in the general conspiracy case. The Jhuner case was held over till the Lahore Conspiracy case should be decided. The Darbar have shown marked willingness in co-operating with Government measures in regard to returned emigrants. **Police.**

28. The Maler Kotla Imperial Service Sappers, who have been re-armed with Lee-Enfield rifles, are a very efficient body of men. Immediately on the outbreak of hostilities the Darbar placed their troops at the disposal of Government and both the half companies, each 100 strong, were employed with Indian Expeditionary Force "A" in France. They are one of the fortunate Indian Army units mentioned in Field-Marshal Sir John French's despatches as having especially distinguished themselves at Neuve Chapelle. A new company has been formed in lieu of the Sappers on active service. **Military.**

FARIDKOT.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 10¾ lakhs; army and police, 435; Chief, Brij Inder Singh, Barar Bans, Jat; aged 18; title, Raja; salute, 11 guns; has a male heir.

29. His Highness the Raja is now over 18 years old and his health throughout the year has been good, except for a little fever occasionally. The trip to Gulmarg during the hot weather considerably benefited his health. His Highness successfully terminated his academical career by passing the diploma examination with distinction from the Aitchison Chiefs' College in April 1914. He returned to his State after his trip to Gulmarg in October 1914 and commenced a course of training in administrative work with Mr. L. Middleton, C. S., as his Tutor and Guardian. The most important event of the year was the birth of a Tikka Sahib of Faridkot and the event was duly celebrated in the State. His Honour the Lieutenant-Governor paid a short visit to the State in January 1915. **Personal.**

30. The Council of Regency, under the presidency of Sardar Bahadur Sirdar Dayal Singh, Man, unfortunately proved a failure and was consequently abolished, and it was decided that the State should, for the future, be administered by a Superintendent. Till the arrival of Rai Bahadur Lala Ganga Sahai, the newly appointed incumbent of this post, Major A. J. O'Brien, C.I.E., the officiating Political Agent, acted as Superintendent in addition to his own duties from the middle of April to the middle of May. A scheme for the improvement of the administration of the State has been drawn up and sanctioned, and from experience gained so far there is every reason to believe that it will be a success. **Administration.**

31. The Darbar have made the following generous donations during the year :—Rs. 50,000 to the Imperial Indian War Relief Fund, Rs. 25,000 to the Prince of Wales' Fund, also a sum of Rs. 25,000 to the Lady Hardinge Memorial Fund. **The War.**

32. The Imperial Service Sappers are very efficient. They have proceeded to British East Africa, having been generously offered by the Darbar for Imperial defence, and from reports received from Major Mainprise, R. E., the officer in charge, they are acquitting themselves well. **Military.**

33. The State have secured the services of a competent Engineer to look after their water-works and electric light schemes and also to be in charge of the Public Works Department of the State. **Public Works.**

PHYSICAL AND POLITICAL GEOGRAPHY.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 31 lakhs; army and police, 933; Chief, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia Sikh; aged 42; has a male heir; title, Maharaja; salute 11 guns; tribute Rs. 1,31,000.

Personal.

34. His Highness the Maharaja enjoyed good health throughout the year. Farly in March 1915 he proceeded to Europe to see his children and after visiting France and Spain is at present touring in America. Shortly after the Maharaja's departure Mr. L. French, C.I.E., I.C.S., who had held the post of Chief Minister, during the past five years, reverted to British service.

Administration.

35. During the Maharaja's absence in Europe the business of the State is being carried on by Khan Sahib Mian Abdul Hamid, Chief Secretary, under the general control and supervision of Tika Paranjit Singh, the heir-apparent. The administration of the State has proceeded very satisfactorily during the year under report. Crime has been normal, and though the return of a large number of more or less disaffected emigrants from America has been a disturbing factor, the prompt and vigorous action of the Darbar and their ready co-operation with the British authorities have prevented any serious outbreak.

The War.

36. On the outbreak of the war His Highness the Maharaja immediately offered the resources of his State to Government. The State Imperial Service Troops were sent on active service to East Africa. The Maharaja very generously offered a contribution of one lakh of rupees towards their maintenance on field service for a period of one year, and this offer has been gratefully accepted by Government. The State has also undertaken to train a number of horses for Government before they are drafted to the front.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 4,30,000; army and police, 162; Chief, Jogendra Sen, Rajput Mandal; minor; title, Raja; salute, 11 guns; tribute Rs. 1,00,000.

Personal.

37. The young Raja, whose health has been good, is still being educated in Queen Mary's College at Lahore. He is now 11 years old and is progressing satisfactorily in his studies.

Administration.

38. Steady improvement is being made in the administration of the State. Mr. A. L. Gordon Walker, I.C.S., Superintendent and Settlement Officer of the State, returned to Mandi from leave on the 2nd April 1914 and remained in charge till the 11th February 1915, when he was obliged to proceed on leave owing to illness. Mr. H. W. Emerson, I.C.S., was appointed Superintendent of the State in his place.

SUKET.

Area, 420 square miles; population 54,928; approximate revenue, Rs. 2,32,000; army and police, 71; Chief, Bhim Sen, Rajput; aged 30; has no male heir; title, Raja; salute, 11 guns; tribute, Rs. 11,000.

Personal and administration.

39. His Highness the Raja, whose health has been good throughout the year, has administered the State satisfactorily on the whole. The financial condition of the State is giving rise to some anxiety.

The War.

40. His Highness the Raja has given 17 mules and a sum of Rs. 30,000 towards the expenses of the present war and has very generously contributed a further sum of Rs. 12,000 per annum for two years. His practical and generous assistance to the cause of the Empire has been gratefully accepted by Government.

IV.—LAHORE DIVISION.

CHAMBA STATE.

Area, 3,216 square miles; population, 135,873; approximate revenue, Rs. 3,89,000; army and police, 419; Chief, Sir Bhure Singh, K.C.S.I., C.I.E., Rajput; has male heir; aged 46; title, Raja; salute, 11 guns.

Personal and administration.

41. His Highness the Raja Sir Bhure Singh, K.C.S.I., C.I.E., continues to administer the State in a very efficient manner.

42. The Raja has shown the greatest generosity in his donations to the war funds. He himself gave Rs. 50,000 and the officers of his State Rs. 2,450. The Raja, besides supplying the Gurkhas on their departure from Bakloh and their families after the regiment had left with free rations, has given a number of horses and the use of his motor-car to the Army Department. The War.

V.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; approximate revenue, 6 lakhs; army and police, 506; Chief, Sir Amar Prakash, K.C.S.I., Rajput; aged 26; has male heir; title, Raja; salute, 11 guns.

43. His Highness the Raja takes a very keen interest in the administration of the State and himself supervises the working of every department. Owing to His Highness' personal interest in every department the State continues to be well administered. The Nahan Water Works were completed and water was actually brought into Nahan, but very heavy rain and floods washed away the bridges over the Jalal stream, and these will have to be reconstructed. The Commissioner paid a visit to the State during the year under report. Personal and administration.

44. The Sirmur Sappers have been lent by the State for active service at the front and are now in Mesopotamia. His Highness the Raja contributed Rs. 10,000 to the Indian Relief Fund, and some Rs. 1,200 were also subscribed by the people. His Highness also made a gift of 25,000 lbs. of tea from his own tea estate for the use of troops in the field. The War.

KALSIA.

Area, 168 square miles; population, 55,909; approximate revenue, Rs. 2,46,966; army and police, 88; Chief, Ravi Sher Singh, Jat; aged 12; title, Sardar; no male heir.

45. The young Sardar, who is now over 12 years of age, is doing well in the Aitchison College at Lahore. The State administration is carried on efficiently by a Council consisting of a President and two members. Sardar Bahadur Sardar Sant Singh, Extra Assistant Commissioner, is the President and continues to work well. The settlement work in the Kalsia State is approaching completion. The Commissioner visited the State twice during the year under report. Personal and administration.

46. Rs. 5,000 have been subscribed by the State and Rs. 2,552-14-0 by the State people towards the Imperial Indian Relief Fund. Rs. 50,000 also were offered by the State and accepted by the Government of India for war expenses. The War.

PATAUDI.

Area, 53 square miles; population, 19,453; approximate revenue, Rs. 15,740; army and police, 37; Chief, Muhammad Ibrahim Ali Khan, Bahadur, Pathan; aged 27; has a male heir; title, Nawab.

47. The Nawab is beginning to take an interest in the State administration. Khan Bahadur Mir Nasir Ali continues as Diwan of the State. The first Administration Report of the State prepared by the present Nawab was for the last year. The Commissioner visited the State during the year under report. Personal and administration.

48. Rs. 10,000 have been subscribed by the State and Rs. 4,640 by the people towards the Indian Imperial Relief Fund. Also Rs. 15,000 were given by the State for war expenses. The War.

LOHARU.

Area, 224 square miles; population, 18,597; approximate revenue, Rs. 88,000; army and police, 84; Chief, Sir Amir-ud-din Ahmed Khan, Bahadur, K.C.I.E., Moghal; aged 56; has a male heir; title, Nawab; personal salute, 9 guns.

49. The financial administration of the State continues to be carried on by Mirza Aziz-ud-din Ahmad Khan, heir-apparent to the Chief of the State, who is trying to improve the finances of the State and is working satisfactorily. Administration

50. The Nawab subscribed Rs. 750 to the Imperial Indian Relief Fund, and Rs. 250 to the Prince of Wales' Fund. The people of the State subscribed Rs. 425 towards the Imperial Indian Relief Fund. Two hundred camels were also given by the State to Government. The War.

DUJANA.

Area, 100 square miles; population, 25,485; approximate revenue, Rs. 77,170; army and police, 133; Chief, Muhammad Khurshaid Ali Khan, Bahadur, Pathan; aged 31; has a male heir; title, Nawab; tribute, 50 sowars, on requirement.

51. The Nawab continues to administer the State affairs himself. The Commissioner paid a visit to the State during the year under report.

Fifty camels were supplied by the State to the Government of India.

VI.—STATES UNDER THE POLITICAL CONTROL OF THE SUPERINTENDENT, HILL STATES, SIMLA.

52. The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including feudatories.	Population in 1911.	Revenue. Rs.	Tribute. Rs.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.	Remarks.
1	Bilaspur ...	448	93,107	3,33,425	8,000	Bijai Chand, C.S.I....	Rajput	42	Raja	Yes	118	*
2	Bashahr ...	3,820	88,957	1,44,442	3,945	Padam Singh ...	Do.	41	Do.	Yes (adopted).	13	
3	Nalagarh ...	258	49,280	1,57,460	5,000	Jogindar Singh ...	Do.	45	Do.	Yes	48	
4	Keonthal ...	116	25,354	1,00,971	...	Bijai Sen ...	Do.	38	Do.	Yes	36	
5	Baghal ...	124	26,008	68,976	3,600	Bikram Singh ...	Do.	22	Do.	Yes	25	
6	Bhagat ...	36	8,797	50,000	132	Durga Singh ...	Do.	13	Rana	No	32	
7	Jubbal ...	288	23,727	1,98,063	2,520	Bhagat Chand ...	Do.	26	Do.	Yes	19	
8	Kumharsain...	90	12,219	30,000	2,000	Vidayadhar Singh ...	Do.	20	Do.	No	7	
9	Bhajji ...	96	14,972	33,504	1,440	Bir Pal ...	Do.	9	Do.	No	32	
10	Mailog ...	43	8,663	37,783	1,440	Durga Chand ...	Do.	17	Thakur	No	16	
11	Balsan ...	51	6,225	18,500	1,080	Bir Singh ...	Do.	51	Rana	No	...	
12	Dhami ...	26	4,484	30,000	720	Hira Singh, C.I.E. ...	Do.	38	Do.	Yes	25	
13	Kothar ...	20	4,016	17,000	1,000	Jagjit Chand ...	Do.	28	Do.	Yes	8	
14	Kunihar ...	80	2,208	6,000	180	Hardeo Singh ...	Do.	17	Thakur	No	9	
15	Mangal ...	12	1,267	1,000	72	Tilok Singh ...	De.	64	Rana	Yes	...	
16	Bija ...	4	1,064	8,496	124	Puran Chand ...	Do.	19	Thakur	No	8	†
17	Darkuti ...	8	521	8,700	...	Ram Saran Singh ...	Do.	72	Rana	Yes	...	
18	Tarooh ...	67	4,493	5,000	288	Surat Singh ...	Do.	28	Thakur	Yes	...	
19	Sangri ...	16	3,022	2,743	...	Hira Singh ...	Do.	65	Rai	Yes	...	
20	Kaneti ...	19	2,854	8,590	...	Amog Chand ...	Do.	24	Thakur	No	...	
21	Delath ...	42	1,392	2,743	...	Narindar Singh ...	Do.	65	Do.	Yes	...	
22	Koti ...	50	8,265	44,154	...	Raghbir Chand ...	Do.	55	Rana	Yes	56	†
23	Theog ...	144	6,345	14,391	...	Padam Chand ...	Do.	29	Thakur	Yes	8	
24	Madhan ...	9	3,901	5,500	...	Randhir Chand ...	Do.	28	Do.	No	6	
25	Ghond ...	28	1,887	5,610	...	Ranjit Singh ...	Do.	32	Do.	Yes	...	
26	Ratesh ...	12	472	700	...	Hira Singh ...	Do.	47	Do.	Yes	...	‡
27	Rawin ...	7	749	3,091	...	Kidar Singh ...	Do.	38	Do.	Yes	...	
28	Dhadi ...	25	244	1,600	...	Dharm Singh ...	Do.	27	Do.	Yes	...	‡

* Tributaries of Bashahr.
† Tributaries of Keonthal.
‡ Tributaries of Jubbal.

53. *Bilaspur.*—The administration is proceeding smoothly. The Raja has taken several measures to encourage recruiting for the army. On the outbreak of the war His Highness offered his personal services and the services of his State. He has also decided to exempt from land revenue the men of the State who are employed in the Indian Army and who may be sent on field service.

54. *Bashahr.*—Raja Shamsher Singh died in August last, and Mian Padam Singh, his adopted son, was installed as Raja on November 13th, 1914. He has as yet only limited powers, and Mr. Mitchell, C. S., continues to act as Manager.

55. *Nalagarh.*—The State Council has not been re-established, and the Raja, at his own request, has been lent the services of Chaudhri Ramji Lall, late Naib-Tahsildar, Simla, to act as Wazir. The Raja has been given full powers of administration subject, till the extinction of the State debt, to the financial control of the Superintendent, Hill States. The debt should be repaid in full during the present year. An heir was born to the Raja in August, but has since died. The Raja offered his personal services and the services of the State in connection with the war.

56. *Keonthal.*—The Settlement work was completed without further trouble, though the new assessment has not yet been announced, pending the receipt of Government sanction. The State is still under financial management.

57. *Baghal.*—The Raja's condition has not improved.

58. *Baghat.*—The health of Kanwar Amar Singh has greatly improved and with it the administration of the State. The Rana (who is now over 13 years of age) offered the services of the State in connection with the war.

59. *Jubbal.*—The forest administration has not been very satisfactory. The working plan is in arrears. The Rana offered his personal services and the services of the State in connection with the war. His offer of Rs. 25,000 in monthly instalments of Rs. 5,000 each towards the war fund was accepted.

60. *Kumharsain.*—Rana Hira Singh died in August last. Tikka Vidyadhar Singh has been recognised as Rana by Government, but, in accordance with the custom of the State, has not yet been placed on the *gaddi*. The services of the present Manager, M. Sukh Chain Singh, are being retained till the Chief's formal installation. An heir was born in March to Tikka Vidyadhar Singh, but died when three months old.

61. *Bhajji.*—The Council have consolidated their position, and the condition of the State is satisfactory. The Rana Bir Pal Singh offered his personal services in connection with the war.

62. *Dhami.*—The Rana at his subjects' wish dismissed the former State officials. The administration is now satisfactory. He offered his personal services and the services of his State in connection with the war.

63. *Sangri.*—In connection with the war the Rai offered the services of his State.

FRONTIER AFFAIRS.

64. There has been a general increase in criminal cases, but this is marked only in adultery, theft and dacoity. In civil cases also there has been an increase, but it is a satisfactory sign that the Baluchis are resorting more freely to the Jirga to settle their disputes in civil matters as well as in connection with cases of adultery and theft. There are special reasons for the increase which occurred in dacoity cases. The Bozdar and Kasrani tribes were infected with a spirit of lawlessness partly owing to the European War but mainly by reason of the intrigues of Sardar Faqir Khan. The offenders have been duly punished and Sardar Faqir Khan has been removed from the district, having been sentenced to a long term of imprisonment. The dacoities in question were the subject of a special report to Government.

PHYSICAL AND POLITICAL GEOGRAPHY.

65. The behaviour of the Tumans has been marred by the ill-conduct of the Bozdars and Kasranis and also of the Sori Lunds. The last-named tribe created disturbances in connection with the payment of *batai* to its Chief. The matter has now been settled. Otherwise the behaviour of the tribes has been generally satisfactory.

66. Sardar Jamal Khan has been installed as Chief of the Leghari tribe, but in consequence of his inexperience it has been necessary to impose a number of restrictions upon the full exercise by him of the powers of Chief. He is practically under probation and his conduct is being watched. Khan Bahadur Sardar Din Muhammad Khan continued to do good services both as acting Tumandar of the Leghari Tuman and in connection with the general administration of Baloch affairs. The Gurchani Tuman was well administered by Nawab Jallab Khan, C.I.E. Sardar Ghaus Bakhsh Khan, Mazari, on the occasion of the recent disturbances in the South-West Punjab, proceeded immediately on requisition to the Muzaffargarh District with a large body of Mazari sowars and rendered very valuable assistance in the suppression of the dacoities of the Alipur Tahsil. Nawab Sir Bahram Khan, K.C.I.E., Mazari Chief, has continued to guide the deliberations of the Chiefs' Jirga and to manage the affairs of his own tribe with wisdom and experience.

9.—Condition of the people.

[For information regarding this section, *vide*—

Administration Report for the years 1911-12, paragraph 249.

Moral and Material Progress Report for the years 1901-02 to 1912-13 and Chapter VI, below.]

67. The monsoon was on the whole well distributed, and the winter rains, though exhibiting remarkable fluctuations from the normal, were favourable. But for the contraction of the area under cotton and sugarcane the autumn harvest, which was 5 per cent. above the average, would have been even better than it was. High prices stimulated extensive rabi sowings, and the matured area exceeded last year's figures by 32 per cent. The surface results of a harvest have seldom been more satisfactory, even if the proved yield falsified some anticipations.

68. The province had a healthy year, though the early winter rains brought about a recrudescence of plague, the effects of which were not fully felt till after the close of the twelve months. There was a satisfactory rise in the birth rate, which amounted to 46·3 on the figures of the 1911 census. The death rate rose, however, to 32 *per mille* and was 0·9 in excess of the quinquennial average.

Fevers and cholera claimed more victims than in 1913, but small-pox was less severe. Prices of food-grains were not excessive till the outbreak of the war. About the end of September, however, there was a sharp rise, and at the end of November the retail price of wheat at the capital was no less than 8 seers the rupee. Wages continued to rise, and the heavy recruiting for the army and in the Lahore and Rawalpindi Divisions the severity of plague brought about a certain shortage of labour. In Lyallpur, which depends on immigrant reapers for the spring harvest, this class was distinctly scarcer than usual.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue.— } Report on the Land Revenue Administration of the Punjab for the agricultural year 1st October 1913 to 30th September 1914.
Revenue Surveys and Settlements.— }

Professional Surveys.—General Report on the Operationss of the Survey of India for the year ending 30th September 1914.

Land Records.—Report on the Operations of the Department of Land Records, Punjab, for the year ending 30th September 1914.

Waste Lands and Government Estates.— 1. Annual Report for the Chenab, Jhelum and Chunian Colonies for the year ending 30th September 1914.
2. Land Revenue Report, *as above.*

Wards Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1914.

Revenue and rent-paying classes.—Land Revenue Report, *as above.*

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I—

Area Totals—Table 1 J.
Classification of Area—Table 2 I.
Incidence of Land Revenue—Table 5 I.
Transfers of Land—Table 6 H.
Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and Collections.

69. The fixed land revenue demand for the year was just a little over Rs. 212 lakhs, a decrease of Rs. 57,615 from the last year's demand. This was due chiefly to the reduction in the rent roll of the Gujranwala District on account of the introduction of a fluctuating assessment in portions of that district. The proportion of the demand collected was 96·2 per cent. and no difficulty was experienced in realizing it. Nearly 7½ lakhs were suspended chiefly on account of the bad harvests in the districts of Hissar, Rohtak and Gurgaon and Rs. 84,000 were remitted for various causes. Of the outstanding balance of the previous year, amounting to Rs. 9,80,101, Rs. 4,00,998 were recovered and Rs. 1,75,604 struck off.

Riverain action.

70. The action of rivers in practically all districts was on the whole beneficial. During the kharif of 1914 heavy floods occurred in the Beas and the Ravi, but no such calamity affected the special assessments of the year under report. The area newly assessed was 45,757 acres, and on 43,086 acres, which were found to have improved, an assessment at higher rates was imposed. The diluviated area was 25,074 acres. Deterioration was confined to 15,181 acres. The net increase in the fixed land revenue roll was Rs. 26,107.

FLUCTUATING LAND REVENUE.

Demand and Collections.

71. The demand on account of fluctuating land revenue rose from 110 lakhs to over 118 lakhs. Unfavourable agricultural conditions led to decreases in the Ambala Division, where fluctuating assesements are

ADMINISTRATION OF THE LAND.

comparatively unimportant, and also in Montgomery, where insufficient floods in kharif 1913 were followed by a poor rabi. In Muzaffargarh on account of the late opening of the canals and the insufficiency of river floods collections showed a slight decrease, but favourable floods and timely rainfall in Jhang and Mianwali caused an improvement of roughly half a lakh in each district. Increased cultivation of lands watered from the Upper Chenab Canal swelled the collections in Gujranwala by nearly 2½ lakhs and water-advantage rates levied for the first time on the same canal in the Pasrur Tahsil of Sialkot yielded over Rs. 22,000. Reassessment of the extensions of the Gugera Branch in Lyallpur resulted in an increase of over 4 lakhs. The increase of Rs. 1,06,433 in the demand in Multan is due not only to the abundance and timeliness of the rainfall, the floods and the canal supply, but also to stricter supervision of the work of annual assessment. In the tracts where the system of fluctuating assessment is now in force it is beyond doubt the most suitable method of assessment and is generally appreciated.

Other Land Revenue.

Demands and Collections.

72. The demand on account of other land revenue was nearly Rs. 49 lakhs, or Rs. 3 lakhs less than in the preceding year. The proceeds of sales of Government estates fell from 40 lakhs to 22 lakhs on account of the decreased sale of proprietary rights to colonists on the Lower Chenab Canal in Lyallpur and Gujranwala Districts. In Jhang District, however, sales increased from one lakh to nearly five lakhs. Auctions of Government waste in Gujranwala and Montgomery raised the receipts from 3¼ to 18¼ lakhs, and the extension of irrigation from the Lower Bari Doab Canal was the cause of an increase in the rents for single harvest cultivation from Rs. 68,500 to Rs. 1,68,500. Grazing is in consequence a declining source of income in Montgomery but remains constant elsewhere, the total receipts from this source being less by Rs. 11,500 than in the previous year.

Miscellaneous.

73. There was a slight increase in the number of processes issued against lambardars in the year under report, but even so the number was much below that of earlier years. These were issued for the collection of 7¾ lakhs, of which 96 per cent. was recovered. Processes were issued at the instance of lambardars for the collection of nearly two lakhs, of which 90 per cent. was collected; the number of these processes also was greater than in the previous years. The severer processes of imprisonment, direct management and attachment of immoveable property were practically not resorted to, and much less use than in the preceding year was made of the power to proceed against moveable property, but the number of warrants issued and executed for the arrest of lambardars and revenue-payers increased considerably. The reason for the increased number of processes is due chiefly to efforts to improve collections where there has been slackness in the past and also in districts where the assessment is notoriously lenient. In 23 districts 15½ lakhs of the land revenue demand were paid by money order. The extent to which remittances have been made in this way varies greatly from district to district. The method continues to be used only for the payment of small sums and by lambardars residing at a distance from the tahsil. Little use has been made of the system of remitting the revenue in currency notes. The plan of varying the dates of payment for different portions of the tahsils was generally found to work well.

11.—Professional surveys.

Surveys.

74. The Riverain Detachment, Survey Department, continued its work of traversing and laying down base lines during the year. The riverain survey of 485 square miles, on the Sutlej, Ravi, Chenab and

Jhelum rivers in Jullundur, Lahore, Sialkot and Gujrat was completed at a cost of Rs. 32,375. The Khushab-Thal Survey was also concluded. The area worked over was 200 square miles, and the cost Rs. 4,592. In Shahpur and Gujrat in part of the tract commanded by the Upper Jhelum Canal, not previously brought under survey, 25 acre rectangles were demarcated over 359 square miles. The cost was Rs. 4,050. The Kangra special survey was completed in Palampur and begun in Kangra. In spite of the constant bad weather 400 square miles were traversed and triangulated. The topographical survey of 8,161 miles in Hissar, Rohtak, Karnal, Ambala, Simla, Sialkot, Gujranwala and Gujrat was also undertaken.

Boundary Delimitation.

75. The Government of the United Provinces decided to reconsider the necessity for determining the provincial boundary. As a result of that decision, special officers from both provinces are now investigating the extent of fluctuation and discrepancy due to the operation of the deep stream rule, and considering proposals for action.

12.—Revenue Surveys and Settlements.

Operations.

76. Ten districts were under settlement during the year. Operations have since come to a close in five districts, namely, Hoshiarpur, Ferozepore, Amritsar, Dera-Hamirpur Tahsils of Kangra and Lyallpur. The duration and cost of each of these settlements and the enhancements taken in each will be found in Statements XIII and XIV of the Punjab Land Revenue Report. Operations are approaching completion in Sialkot, Lahore, Gujrat and Shahpur. It was found necessary to extend the period of settlement in Lahore, Gujrat and Shahpur. In the first and last-named districts this was due to late orders being received on the assessment reports which had to be referred to the Government of India and in Gujrat it is due to colonization operations having been undertaken in addition by the Settlement Officer. Progress in Shahpur has been delayed chiefly owing to negotiations with the private canal owners for the acquisition of their canals which are affected by the Upper Jhelum Canal.

77. The final settlement reports of Amritsar and Gujranwala were submitted during the year. The question of the assessment of the Bhakkar Thal villages, which had been reserved for further consideration in the orders of Government on the Mianwali final settlement report, was taken up and decided. The Settlement Officer's assessment was confirmed for the same term as was allowed to the rest of the district, and orders as to the method of collection were passed.

78. Forecast reports were received during the year from Simla and Montgomery. In the former case sanction to the inception of settlement was given and operations began after the close of the year; in the latter it was decided to postpone the re-settlement of the Ravi Tahsils which alone were ripe for re-settlement, but a simple system of fluctuating assessment was introduced to meet the changes imminent through the opening of the Lower Bari Doab Canal.

A scheme of future settlement operations has been drawn up and will be found as Appendix V in the Punjab Settlement Manual.

Settlement staff.

79. The opening of the Kangra and Jullundur settlements at the beginning of the year afforded employment for a large number of Naib-Tahsildars and kanungos released from other settlements. Elsewhere, however, reductions of establishment were carried out as tahsils were completed, and at the end of the year half of the settlements had each less than the full establishment of one tahsil. Considerable difficulty was therefore found in providing employment for the subordinate establishment, and the difficulty was aggravated by the decision to postpone the resettlement of the Ravi tahsils of Montgomery. As reductions proceeded

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it was found necessary to dispense with the services of all officiating and sub. *pro tem.* kanungos, and it is also proposed to retire men whose term of service is almost complete. The reductions resulted in an excess in the 1st grade of kanungos, and all grade promotion has now been stopped till the excess is absorbed. The Naib-Tahsildar as well as the kanungo establishment has suffered from the contraction of settlement operations, for it has been found necessary materially to reduce the number of permanent posts in each division.

13.—Land Records.

Patwaris.

80. The experiment of distributing work in canal-irrigated districts between the Canal and Revenue patwaris is still in progress in Lyallpur and has also been introduced in Shahpur. There is a hope that the general scheme on the lines of the present experiment is feasible, but the experiment is being continued for the present in selected districts only in order to determine the convenient size and nature of circles and the method and degree of supervision necessary. The work of the patwaris continues to compare favourably with that of other branches of the Revenue Establishment, and offences meriting dismissal have been fewer than before.

Kanungos.

81. The scheme for amalgamating district and settlement kanungos is reported to be working satisfactorily on the whole, and has been properly worked in most districts. Selected field kanungos in districts not under settlement attested about 8,000 cases of undisputed inheritance, but the only district in which appreciable relief was afforded to Revenue Officers was Lyallpur. In eight districts under settlement all permanent kanungos were empowered to decide cases of undisputed inheritance, but only 17,000 cases were decided, of which 15,000 were in the Kangra District.

Records.

82. During the year record work was completed in Hoshiarpur and reached the final stages in Ferozepore, Sialkot, Shahpur and the Dehra-Una settlement. In Lahore and Gujrat riverain measurements are in progress, and in the latter district killabandi also, while good progress was made with killabandi work in the Montgomery colony. Settlement operations commenced during the year in Jullundur and the Palampur, Kangra and Nurpur Tahsils of Kangra. In the former district more than half the record work in the Jullundur and Nakodar Tahsils was completed, but in the latter little revision of the record took place as the measurements are based on traverse data furnished by the Survey Department, which only began to deliver *masavis* towards the end of the year. The state of the annual records is satisfactory. Supervision by the higher ranks appears to have materially improved.

14.—Waste Lands and Government Estates.

The old colonies.

83. The following statement shows the area sown on the permanently allotted area with percentage of crops failed in the last two years :—

	Area sown.		Percentage failed.	
	1912-13.	1913-14.	1912-13.	1913-14.
	Acres.	Acres.	Acres.	Acres.
Lower Chenab	1,872,675	1,922,265	·3	·3
Lower Jhelum	396,730½	400,739	4·2	6·20
Chunian	78,636	85,665	8·9	6·29

It will be seen that there was a considerable increase of cultivation upon all three canals. The remodelling of distributaries on the Lower Chenab has been satisfactorily carried out.

84. In the Lower Chenab Colony the assessments of the Lyallpur District have been completed, the assessment undertaken during the year under report yielding an increase of Rs. 2,61,084 on the previous demand. Assessments were also completed in 35 proprietary villages in Jhang. Government has recently passed orders sanctioning the offer of fixed assessment for both land revenue and occupiers' rate to certain villages in the Gujranwala District in which Gibbs' modules have been set up. It is satisfactory to learn that these modules have proved successful and are popular. There were no settlement proceedings in the Lower Jhelum Colony. Some remeasurement was carried out in the Chunian Colony. **Re-assessment.**

85. Improvements in the water-supply at Gojra, Toba Tek Singh and Chak Jhumra are approaching completion. The Jhelum Colony towns appear to be in a prosperous condition and various improvement schemes are in progress. The head-quarters of the Shahpur District were transferred to Sargodha on 1st April 1914, resulting in a marked access of prosperity to the town. **Towns.**

86. Good progress has been made in mule-breeding in the Lower Chenab Colony and the number of mules purchased yearly shows an increase and the stamp of mules is improving, while fewer defaulters have been reported by the Army Remount Department than in the previous year. The four Grantee Camel Corps are well reported on by the Transport Department. The abolition of one of these Corps has been under consideration, but the proposal has been postponed on account of the war. **Service rents.**

87. The Commissioner of Rawalpindi gives a very encouraging report of the successful working of the horse-breeding conditions in the Lower Jhelum Colony. The demand for remounts in war-time is the test which the scheme was designed to meet, and it is most gratifying to learn that it was met so well.

88. Progress was considerably retarded by the mishap to the Upper Jhelum Headworks by which the hope of a supply of water for the rabi harvest of 1915 was frustrated. In spite of all obstacles, however, very satisfactory results have been achieved in the Lower Bari Doab. 146,156 acres have been allotted permanently, though, as the conditions of the various kinds of grants are still under consideration, these allotments are, except as regards land sold at auction, technically only of a temporary nature. Of this area 41,162 acres represent grants for special purposes, 86,325 acres allotments on peasant terms to residents of the Montgomery District and 18,669 acres land sold at auction. In addition all preliminaries have been made for allotment for a number of other special purposes and to colonists from other districts. Allotment to colonists from districts has been suspended partly on account of the Mangla mishap and partly because of the war. It has been decided to allot an additional area of 75,000 acres as Military reward grants and consequently no further allotments have been made to other districts until Government has more accurate information as to the culturable commanded area. **The Lower Bari Doab.**

89. Proposals have been received for selling town sites at Okara, the lay out of which has been prepared in accordance with the recommendations of the Town Planning Committee, and Government has been asked for the services of an Engineer for laying out the town at Khanewal.

90. The land to be irrigated by the Upper Chenab Canal is situated in the Gujranwala and Lyallpur Districts. In both districts the necessary preparations have been made for the colonization of the peren- **Upper Chenab Canal.**

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nial area. This on measurement has been found to be somewhat less than had been anticipated, and, as at present ascertained, is 38,669 acres. Orders have been issued for allotment to Disappointed Jhelum Grantees. The kharif area is not at present exactly ascertained, but owing to the decision of Government not to proceed with the project of an irrigated plantation on this canal the allotable area will be larger than anticiapted.

15.—Wards' Estates.

91. The Court of Wards began the year with 4 estates under its charge and took over 3 during the year. Three estates were released during the year in a prosperous condition. As an illustration, the Jhang Sial estate in the Jhang District may be taken. It came under management in 1904 on the application of the wards and was released in 1914 on the estate being restored to solvency. In these ten years not only have debts to the value of over Rs. 62,000 been paid off, but the assets have increased in value by Rs. 18,000. Deputy Commissioners of two districts were during the year appointed guardians under the Guardian and Wards Act (VIII of 1890). The auction sales of land on the Lower Bari Doab Canal gave certain estates an opportunity to make large investments. 4,400 acres of land were purchased by them for Rs. 12,12,732. One-and-a-half lakhs were spent by all the estates under the Court of Wards' control on permanent improvements. The Mamdot estate in the Ferozepore District has made progress in arboriculture by planting 1,400 trees. The horse-breeding stud of the Kot estate in the Attock District, judged by the test of prizes won at shows, has been very successful during the year. The same estate has expended over Rs. 43,000 in advances to tenants out of a provincial total of Rs. 46,000; the outstanding balance under this head is, however, only Rs. 20,000. More estates might find it to their advantage to finance their tenants from crop to crop rather than leave this to the *bania*, especially if they could arrange to give their advances in the form of selected seed.

16.—Revenue and rent-paying classes.

General.

92. The total cultivated area of the province has fallen by 169,000 acres. It is probable that this is merely statistical, being due to more accurate soil classification when a new record-of-rights is prepared at settlement or at quadrennial attestation, but the causes of variation are being examined. The incidence of the assessment on the privately owned area returned as cultivated is Re. 1-3-6 per acre. The percentage of the cultivated area held on mortgage continues to fall, and is now 11½ per cent. The proportion held by members of non-agricultural tribes has fallen from 5·4 to 5·1 per cent.

Loans Act.

93. The total amount of takavi advanced for land improvements was Rs. 3,23,365 or three-quarters of a lakh more than in the preceding year. The amount of loans advanced reached the level of the dry years 1907 and 1908 and was not much below the level of 1902 and 1903. The increase, however, is not due to bad seasons, but to increase of prosperity of the people, the extension of canal irrigation and the growth of co-operative societies. The amount advanced for the purchase of seed and cattle was little more than half the amount taken in the previous year and fell to Rs. 2,62,885.

Transfers.

94. With the increasing prosperity of the province the reluctance of the zamindar to make permanent alienations of land becomes more pronounced. The total cultivated area in which proprietary rights were sold during the year fell to 121,809 acres. The total area sold was 209,605 acres. These figures do not include sales of proprietary rights to colonists.

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The decrease in total area transferred is from 279,222 to 259,494 acres. Proprietary rights were mortgaged with possession in 245,631 acres of cultivated land and redeemed in 282,290 acres as against the previous year's figures of 219,672 and 268,698 acres, respectively. The Redemption of Mortgages Act tends to increase the number of all transfers for value. Redemptions continue to gain on mortgages and the area under usufructuary mortgages is decreasing and now stands at 11·5 per cent. of the cultivated area. Exchanges and gifts maintain a normal course.

95. There was a considerable rise in the transfer value of land in almost every district in the province, the average sale price, corrected to allow for abnormal transactions, being Rs. 71 per acre and Rs. 122 per acre cultivated as compared with Rs. 66 and Rs. 101, respectively, in the previous year. The rise may be attributed to the recent banking crisis which increased the volume of money seeking a safe investment in land and to the high prices which were obtained for agricultural produce during the year.

Land Alienation Act.

96. The working of the Land Alienation Act occasioned no special difficulty. The policy of notifying small tribes of true agriculturists which had not been considered strong enough numerically to be included in the original notification is being continued. Members of agricultural tribes bought 207,097 acres and sold 193,082 acres. They gained by mortgage 254,507 acres, but lost 283,315 acres and effected redemption of 304,397 acres, but suffered redemption of 308,009 acres. They are therefore better off to the extent of proprietary rights in 14,015 acres, but are worse off to the extent of rights of mortgage for limited periods in 32,520 acres. The conclusion is that the permanent rights in land are returning to the hands of the cultivating classes, and that the capital of the money-lending classes is being more freely devoted to the land under approved forms of security.

Rent-paying classes.

97. Suits for the enhancements of rents paid by occupancy tenants fell from 1,772 cases in the preceding year to 1,589. Plaintiffs were successful in 75 per cent. of the cases. Litigation of this description increased considerably when the districts in which occupancy tenants are numerous came under re-settlement, but is now declining. The volume of litigation is small particularly in view of the abnormally large number of districts now or recently under settlement. Only 3 out of the 40 suits for reduction of rent were successful. Litigation for the ejectment of occupancy tenants was inconsiderable. Proceedings against other tenants were, however, more numerous than in the preceding year. Applications for ejectment rose from 12,003 to 13,417 and notices issued from 26,368 to 30,019, but ejectments ordered fell from 6,801 to 6,472 and ejectments actually made from 6,163 to 5,671. Decrees for ejectment numbered 2,400 or slightly less than in 1912-13. There is no evidence that the relations between landlord and tenant were other than normal. Tenants were successful in contesting liability to ejectment in only 955 cases.

MISCELLANEOUS.

Descent of Jagirs Act.

98. Three declarations of a rule of integral descent were notified in the year under report, the total annual value being 1,767. The total number of jagirs now notified under the Act is 142 with an annual value of nearly 8 lakhs out of a total of above 30 lakhs assigned.

Punjab Land Preservation (Chos) Act.

99. Orders were passed by Government on the proposals made by the local officers for the extension of the scope of operations in the Hoshiarpur Siwaliks, and for the revision of the protective measures. It was decided not to impose any restrictions outside the area already notified, or to extend to the whole of it the restrictions of Section 5, but the local officers have been directed to select suitable areas, which are to be the

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catchment areas of the more destructive chos to which that section may be applied. In Ambala the areas to be protected were demarcated and notifications under sections 3 and 4 published. The areas to which the application of section 5 is suitable were also ascertained and proposals were submitted at the end of the year.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1914.

(2) Report on the working of the Criminal Tribes Act for the year 1914.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1914.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1914.

Prisons.—Report on the Administration of the Jails in the Punjab, 1914.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1914.

Registration.—Note on the Registration Returns of the Punjab for the year 1914.

Legal Affairs of Government.—Report on the Administration of the legal affairs of the Government of the Punjab for the year 1914.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1914-15.

Municipal Administration.—Report on the working of municipalities in the Punjab during the year 1914-15.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part VI.—Administrative and Judicial.

Part VIII.—Local Funds.

17.—Legislating Authority.

100. The following changes took place amongst the Hon'ble Members of the Council :—

(1). The Hon'ble Mr. A. B. Kettlewell, C.S., was nominated, *vice* the Hon'ble Mr. C. A Barron, C.I.E., resigned.

(2). The Hon'ble Mr. C. A. Barron, C.I.E., was nominated, *vice* the Hon'ble Mr. A. B. Kettlewell, resigned.

(3). The Hon'ble Sir Michael W. Fenton, K.C.S.I., I.C.S., was nominated, *vice* the Hon'ble Mr. H. J. Maynard, resigned.

18.—Course of Legislation.

Business transacted.

101. Three meetings of the Legislative Council were held during the year under report—two in Lahore and one at Simla.

Only one Bill—a Bill to amend the Punjab Courts Act,—was introduced and passed in Council during the year.

It received the assent of His Excellency the Viceroy on the 27th April 1914 and has become law as Punjab Act IV of 1914.

Out of the following four resolutions :—

(1). Resolution on the problem of Beggary,

(2). Resolution on the amendment of Agreement entered into for the supply of Portland and other Cements,

(3). Resolution of sympathy with His Excellency Lord Hardinge and his family at the untimely death of Her Excellency Lady Hardinge,

(4). Resolution in regard to the War,

moved in Council, the first two were withdrawn, while the others were carried and passed.

One hundred and fifty-two questions were put and answered.

India Acts.

102. The Acts of the Imperial Legislative Council more particularly affecting the Province passed during the year are :—

(1). The Sea Customs (Amendment) Act, 1914 (XII of 1914).

(2). The Indian Life Assurance Companies (Amendment) Act, 1914 (XIII of 1914).

(3). The Indian Post Office and Telegraph (Amendment) Act, 1914 (XIV of 1914).

(4). The Indian Army (Amendment) Act, 1914 (XVI of 1914).

(5). The Indian Aircraft (Amendment) Act, 1914 (XVII of 1914).

(6). The Second Repealing and Amending Act, 1914 (XVII of 1914).

(7). The Emergency Legislation Continuance Act, 1915 (I of 1915).

(8). The Foreigners (Amendment) Act, 1915 (III of 1915).

(9). The Defence of India (Criminal Law Amendment) Act, 1915 (V of 1915).

(10). The Indian Paper Currency (Temporary Amendment) Act, 1915 (V of 1915).

(11). The Indian Patents and Designs (Temporary Rules) Act, 1915 (V of 1915).

(12). The Sea Customs (Amendment) Act, 1915 (IX of 1915).

19.—Police.

General Police Force.

General.

103. It is satisfactory that the decrease in crime which was first noticed in 1913 has been maintained in the year under review. The returns of true cognizable crime (47,375) again exhibit a slight decrease of 501 cases, and there is some ground for the belief that, but for the disturbance of normal conditions created by the war, the criminal record of the Province, which seems to have reached its high water mark in the year 1913, would have shown even a more marked improvement. Perhaps the most satisfactory features of the year were the success of the special measures taken in the Rawalpindi Division for coping with violent crime, and the success of the Criminal Investigation Department and the mobilised Police reserves, ably backed up by the district forces, in coping with the determined efforts of the *Ghadr* party of returned emigrants to produce a state of anarchy in the central districts of the Province. In both cases it was the effective and cordial co-operation of the people of the Province who were prompt to show that, as a body, they had no sympathy with the anarchic ideas and terrorist methods of the revolutionary, and had

no sympathy with lawless criminals, that enabled the police to preserve peace and order during a time of stress and trouble. That Government was not slow to reward services rendered by the public to the administration in connection with the suppression of crime and disorder is shown by the fact that 61 persons received grants of land amounting to 1,890 acres, the revenue of 7 villages to the extent of Rs. 10,125 was remitted, and Rs. 2[illegible],850 was paid in cash rewards.

Murders.

104. There was a most satisfactory drop in murders during the year from 625 in 1913, the highest figure on record, to 538. If cases of culpable homicide and attempted murders are also included, the decrease is from 927 to 841 cases or nearly 10 per cent.

Dakaitis and Robberies.

105. There was only a slight decrease in dakaitis and robberies, but, in view of the activities of the political dakait and the existence of other disturbing factors during the latter half of the year, it is a matter for congratulation that a considerable increase in this class of crime was not recorded.

Burglaries.

106. Compared with 1913 the year under review shows a decrease of 277 cases in burglaries, which was chiefly due to the excellent results obtained by *thikri pahra* operations in the Western Range and, to a lesser extent, in the Central Range. These good results were unfortunately discounted by an increase of over 600 cases in the Eastern Range, which appears to have been victimised by outside criminals.

Thefts.

107. Statistics show an increase in ordinary thefts of 409 cases, and a slight decrease in cattle thefts. The high prices prevailing during the latter half of the year were undoubtedly responsible for the increase in ordinary thefts, and the discouraging effect of the high prices of fodder similarly explains the decrease in cattle thefts.

Police working.

108. Police working as judged by judicial statistics has been slightly more successful than in the previous year, the percentage of cases convicted to tried being 70 compared with 68. This improvement, which set in in 1913, may be ascribed to the more speedy disposal of cases by trying courts; delays in dispensing justice being without doubt one of the most fruitful causes of the failure of justice. In this connection it is to be noted that the delay occasioned by the duplication of proceedings owing to the existing commitment procedure has been brought to the notice of the Government of India in reference to the amendment of the Criminal Procedure Code.

Preventive sections.

109. The preventive sections of the Criminal Procedure Code and their working have been again the subject of much unfavourable comment, and it appears obvious that the bad livelihood sections as they stand do not furnish a very complete or satisfactory method of dealing with professional criminals. The question of a reform on lines which, while placing this class under stricter control, will obviate the alternative of confining in jail in default of security, is now engaging the attention of the Local Government.

Disregard of authority.

110. Several cases of assault upon the Police and other officials in the execution of their duty were reported during the year, most of which occurred in the Gujranwala, Sialkot, Lahore, Lyallpur and Attock Districts. It is noteworthy that in a considerable number of cases reported by the Central Range districts Police officers were assaulted while executing, under the orders of courts, search warrants for abducted women.

Criminal Investigation Department.

111. The Criminal Investigation Department has, owing to the revolutionary and seditious activities produced by the war, been burdened with very arduous responsibilities, and it is most fortunate that it was reorganised and strengthened in time to deal with the various under-currents of more than one dangerous movement. The hearty co-operation received from district officials has contributed in a large measure to the success with which the department has handled a difficult situation. The Local Government is also much indebted to the Darbars and the Police of the Native States in

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the Province for their energetic co-operation in dealing with the seditious activities of persons who resided or found refuge within their borders.

Finger Print Bureau.

112. The Finger Print Bureau continues to show a large volume of successful work.

Internal economy.

113. The Police force was substantially strengthened during the year, the increase being mainly due to the requirements of the canal colonies, the expansion of the railway town of Mughalpura and the necessity for strengthening the staff of the Criminal Investigation Department. Concurrently with this, however, the Lieutenant-Governor sanctioned a searching enquiry into the distribution of the Police throughout the Province, and an officer has been placed on special duty for the purpose. There is reason to believe that considerable economy can be effected by a redistribution of the force on lines which are more in accord with modern conditions, but this will be more than counterbalanced by the early necessity of increasing the pay of the lower ranks,—a question which is now under the consideration of Government. The number of resignations, dismissals, and vacancies and the difficulties experienced in recruiting—which are aggravated by the competition of other provinces who are able to offer higher rates of pay—indicate that the present pay is no longer sufficient to attract or retain the right stamp of man in the subordinate grades. The system of promotion and direct appointments to the upper subordinate ranks is also under examination.

Rural Police.

114. Mention has already been made of the excellent results that have been obtained in certain districts by the intelligent use of the *thikri pahra* and *nakabandi* system of patrolling. This system is of a voluntary nature, and depends for its success on the loyal assistance rendered by the villages in which it has been introduced. The Local Government is now prepared to consider the question of the expediency of placing this system on a definite and legal footing. During the year 11 zaildars, 283 lambardars and 264 chaukidars were punished for failing to assist the police and for neglecting their duties. On the other hand, 241 zaildars, 528 lambardars and 252 chaukidars were rewarded for services to the criminal administration. It will be seen, therefore, that the policy of punishing those who fail in their public duty to the administration and, at the same time, of liberally rewarding good service is being steadily pursued.

Criminal Tribes.

115. New rules under the Criminal Tribes Act have been issued and the Local Government is about to take action on the recommendations contained in the report submitted last year by the Provincial Criminal Tribes Committee. The behaviour of the Harnis and Bauriahs continues to be satisfactory and the character of the Minas shows a remarkable change for the better. Members of this last tribe now enlist in the Army and Police, and nearly all the boys willingly attend school, some of whom, indeed, are doing well as school teachers. On the other hand, the Sansis, Balochis, Dhinwars and Pakhiwaras continue to be troublesome, and in many cases appear to be intractable.

Chemical Examiner.

116. For the first time for many years the work of the Chemical Examiner has slightly decreased, the total number of cases being 1,833 with 5,511 articles, as compared with 1,919 and 5,902, the figures for the year 1913. Arsenic and opium continue to be the most commonly used poisons in human poisoning cases. The percentage of cases in which the use of arsenic was detected has fallen from 34·6 per cent. in 1912 to 27·21 per cent. in the year under report. In cattle poisoning arsenic was found to have been used in 84·42 per cent. of cases. The high percentage of arsenic still used in cattle poisoning cases points to the fact that the poison is easily procurable

and it is difficult to accept without reservation the theory that the Poisons Act is solely responsible for the decrease in its use in human cases. During the year under report the services of the Imperial Serologist were for the first time utilised to any considerable extent by this Province.

20.—Criminal Justice.

117. The general course taken by crime during the year has been discussed in the previous section, and need not be repeated here.

Disposal of cases.

118. The decrease in the volume of crime coincides with improved results in the Criminal Courts. The percentage of cases resulting in conviction or compromise rose from 71 to 73, and of those resulting in conviction from 36 to 37. In murder cases convictions rose from 47 to 49 per hundred persons tried. There has been a slight fall in the percentage of successful appeals in all classes of appellate courts. The number of death sentences confirmed was 150. This is the highest on record in the Punjab and is 3 higher than last year.

119. Although the new Sessions Divisions were not formally constituted till August, when the revised Punjab Courts Act was brought into force, the six new Judges sat as Additional Sessions Judges from January, and there were 21 Sessions Courts throughout the year. There was less press of original work, and only 990 cases were disposed of as against 1,112 in 1913, the average duration falling from 61 to 48 days. The disposal of appeals were from 7,548 to 7,875. Disposal of section 30 cases by District Magistrates fell from 425 to 372, leaving 1,354 to be disposed of by specially empowered Magistrates against 1,339 in the previous year.

120. The provincial average duration in Magistrates' Courts was 19 days as compared with 18 in 1913. In Sessions cases the average duration in the Sessions Court is 48 days,—a vast improvement on the 61 days of 1913. But even so, allowing 30 days for the commitment proceedings a Sessions case takes 11 weeks to decide, and the Local Government has recently urged that steps should be taken to abolish or shorten the commitment procedure.

General.

121. The systematic inspection of Subordinate Courts by Hon'ble Judges of the Chief Court was undertaken for the first time during the cold weather, 1914-15. A third Temporary Additional Judge was sanctioned in this connection for six months and assumed charge on the 21st October 1914.

Marriage registration.

122. Registration of marriages is in force in a few districts, and appears to be producing good results in discouraging false charges. Reports on its working are now before Government, which will be willing to facilitate the extension of the system where public opinion favours it.

Act XIII of 1859

123. As a result of the complaints in regard to the working of Act XIII of 1859 the Hon'ble Judges have issued a circular drawing the attention of Subordinate Courts to the objects of the Act, and pointing out the most common mistakes in its application. If these instructions do not have the desired effect it will be for consideration whether the Act should remain applicable to the Punjab.

Procedure.

124. The problem of dealing with the mass of false evidence given in the Courts is one of great difficulty, but it has been recognised that it would help Judges to gauge the value of a witness' statement if they could be relieved of the drudgery of recording statements in full. They would then be able to devote more attention to the demeanour of the witness and to the general conduct of the case. After consultation with the Hon'ble Judges it has been decided to try the experiment, in one or two Sessions Courts, of allowing the Judge to dictate the record in English to a stenographer or typist. It is not at present possible to exempt him from the necessity of making a memorandum himself as the witness proceeds, but the memorandum may be of the brief nature that the framers of the Code appear to have contemplated.

PROTECTION.

21.—Prisons.

Institutions. 125. The new Sub-Jails at Dera Ghazi Khan, Sargodha and Amritsar were completed and occupied during the year. The old Shahpur Jail is being temporarily converted into a Special Institution for the treatment of tubercular prisoners owing to difficulties in connexion with the water supply : the scheme for the fifth Central Jail is still incomplete.

Accommodation. 126. The total accommodation available during the year was for 14,660 prisoners, while the daily average (including lock-ups) was 14,869 or 209 in excess of the accommodation. This overcrowding was relieved at first by establishing camps within the Central Jails at Montgomery and Multan and subsequently spreading the surplus over all jails Over a lakh and a half of rupees were spent on buildings.

Admissions. 127. There were 39,833 admissions during the year as against 38,273 in 1913. The daily average of prisoners was 14,982 as against 13,613 last year.

Juveniles and juvenile adults. 128. Seventy-three children received sentences of imprisonment, against 90 last year. The Borstal Institute continues to develop and the number of inmates now collected in it is 1,145. Government has just published an interesting brochure recently written by Captain F. A. Barker, I.M.S., Superintendent of the Lahore Borstal Jail, dealing with the principles of the Borstal treatment as applied to Indian prisoners.

Under-trials. 129. The average period of detention has fallen from 25 to 23 days, and the percentage of convictions on those admitted has increased from 42 to 43·5.

Discipline. 130. Seventeen prisoners escaped, six from within jail walls and the remainder from extra-mural gangs. Of these 9 only were recaptured during the year. The use of fetters as a measure of security rose from 129 to 170. The conduct and work of the staff has not been as efficient as in the previous year owing to the reversion of Indian Medical Service Officers to military duty, and the comparative inexperience of some of their successors. The remarkable diminution in the number of prison offences generally which was noticed last year was well maintained, the number for the year being 27,537 as against 29,461 in 1913 The number of prisoners punished by whipping rose from 7 to 24. Convict officers continue to do excellent work. The remission system still continues to exert an influence for good on the conduct and behaviour of the prisoners.

Financial. 131. The total expenditure on guarding and maintenance was Rs. 11,61,145—an increase of Rs. 1,23,431 on last year, due mainly to the higher population. On the daily average strength the cost per head was Rs. 78-3-7, as against Rs. 77-1-8 in 1913, due to the rise in the price of grain.

Industries. 132. The daily average number of convicts sentenced to labour was 13,350 as against 11,927 last year. The cash profits realized were Rs. 2,78,285, or an increase of Rs. 77,856 over those of last year. The indirect profits realized from the employment of convict labour on the erection and repair of buildings, garden and other jail duties were Rs. 5,65,211 as against Rs. 4,85,688 in 1913. The cash earning per head rose from Rs. 16-13-0 to Rs. 20-13-0, while the net cost per head fell from Rs. 62-4-0 to Rs. 59-9-0.

Health. 133. Admissions to hospital increased by 752, the daily average sick by 55, and the mortality rate by 9·09. These increases are due to the higher population of the year, climatic conditions and the temporary disorganization of the medical staffs attached to the Central Jails at Montgomery and Multan, caused by the reversion to military duty of their whole-time Medical Officers. Dysentery, which was widespread and affected every jail, allowed for 898 admissions and 66 deaths, malaria for 1,396 admissions and 3 deaths, pneumonia for 288 admissions and 51 deaths, tubercle for 374 admissions and readmissions and 111 deaths. Regarding this disease complete segregation of all recognized cases is now the only remedy left

to be tried, and arrangements are being made accordingly to have this done in the old Shahpur Jail. A tubercle expert was attached to each of the Central Jails during the year and much has already been done by these officials to reduce the incidence of the disease. Other diseases accounted for 133 deaths.

22.—Civil Justice.

134. The most noteworthy feature of the year under report was the change in the status and organization of the Civil Courts of the Province effected by the Punjab Courts Act of 1914 on 1st August. On that date the 21 Divisional and Additional Divisional Judges became District Judges, 14 of one district and 7 of two districts each, the civil district remaining identical with the Revenue District. The old District Judges became Subordinate Judges, losing their powers of administration and control of other Subordinate Courts and their position as principal courts of original jurisdiction within their districts. The Senior Subordinate Judge in each district was invested with the appellate powers exercised by the old District Judge, and in certain districts was also authorised to dispose of proceedings under various special Acts. **Organization.**

135. The number of suits instituted in the Province in 1914 was 195,266 as compared with 191,702 in 1913. The difference of 3,500 is accounted for by a rise of 5,000 in suits for money or movables, and a fall of 1,500 in title and other suits. The Inspecting Judges, however, found that there was diversity of practice in classification of suits for statistical purposes, and variations in figures may really be largely due to this cause, which it is now hoped to remove by amended instructions. **Institutions.**

136. The total value of suits instituted has risen from Rs. 3,54,68,797 in 1913 to Rs. 4,43,01,270 in 1914. In Lahore District alone the total value increased by 75 lakhs and the average value increased from Rs. 420 to Rs. 1,017. The Provincial average value rose from Rs. 186 to Rs. 227. **Value of suits.**

137. Disposals of original suits were 207,584 out of 238,966 for disposal. Each figure exceeds that of 1913 by over 5,000. The duration of the contested cases in Courts below District Courts has fallen from 75 to 74 days, and the annual increase of several years past has been arrested. **Disposals.**

138. In the Chief Court both institutions and disposals were much in excess of those of previous years. Institutions of first appeals continue to rise, and in spite of increased disposals the pending file is rising also. Disposals of further and second appeals, however, exceeded institutions for the first time in recent years, and the Court had to deal with abnormally heavy criminal work. The Indian Companies Act, VII of 1913, which was brought into force on 1st April 1914, has increased the work of the Chief Court on the original side. **The Chief Court.**

139. The results obtained in execution proceedings vary but little from year to year. During the last 13 years the percentage of applications that have been satisfied in full has ranged from 22·1 to 26·5 and the percentage that were wholly infructuous from 56 to 58·7. **Execution.**

140. The working of the Insolvency Act was subjected to careful examination during the year, and proposals for its amendment have been made to the Government of India. The necessity for an inquiry is emphasized by the growth of work under the Act. In 1911 there were 1,022 applications dealt with : their number has steadily risen till it stood at 2,159 in 1914. The percentage of insolvents discharged has, however, risen from 17 in 1912 to 25 in 1914. Realisations were also better by nearly a lakh, and the total of unsatisfied claims was reduced to 29 lakhs as compared with 33½ lakhs last year. **Insolvency Act.**

141. The rules under the Guardian and Wards Act have been amended, and it is not now obligatory on a court to direct the annual submission of accounts and to maintain a continuous pending record in **Guardian and Wards Act.**

cases where the income of the wards' estate does not exceed Rs. 500. It is to be hoped that the administration of the Act on broader lines will reduce litigation and the work of the Courts without causing any countervailing disadvantages.

23.—Registration.

General business.

142. Compulsory registrations (82,911) shew an increase of 3 per cent. over the figures of 1913 due to increases under sales and mortgages of 2 and 5 per cent., respectively. No general explanation of the increase is possible, except in the Ambala Division, where it can be ascribed to partial crop failure at kharif 1913 and rabi 1914. Agricultural prosperity and the enhanced value of land are the probable causes in Hoshiarpur, Gurdaspur and Sialkot, while the general increase in the western districts of the Punjab is explained only in Mianwali where compulsory registrations rose by 21 per cent. from 1,572 to 1,902 owing to additions to the mortgage debt and to conversion of mortgages into sales, presumably with the object of redeeming part of the mortgaged land. The only noteworthy decreases occurred in Jullundur, Ferozepore, Jhelum, Attock and Lyallpur. In Jullundur it is ascribed to decreased emigration and to cholera and plague, in Ferozepore to greater reliance on our mutation procedure and in Jhelum and Attock to a bumper rabi. The value of the property transferred increased by 11 per cent., a clear indication of the steady rise noticed in previous reports in the value of immoveable property.

143. Optional registrations affecting immoveable property (3,924) increased by 3 per cent. in number and 11 per cent. in value. The value of leases rose considerably owing to the registration of one document in Shahpur of the value of Rs. 13,500 while the heavy increase in the value of "other instruments registered under section 18, clause (*a*) and (*b*)" occurred chiefly in Amritsar, Gujranwala and Multan.

144. Optional registrations affecting moveable property (4,909) shew an increase of 6 per cent. in number and 17 per cent. in value The large increase in the value of sales is due to the sale in Simla of a European jeweller's stock and in the value of all other documents registered under section 18, clause (*f*), to the registration in Lahore of some deeds of partnership of very high value.

Land Alienation Act.

145. Rules have been sanctioned by Government and incorporated in Appendix VII to the Registration Manual by which the registering officer is required to note against the copies of documents contravening the Land Alienation Act that the sanction of the Deputy Commissioner had not been obtained and that registration was in contravention of the provision of section 17 (2) of the Act. Similar notes are also prescribed on copies of mortgage deeds cancelled under section 9 (2), and when a mortgage deed is revised or altered under sub-sections (1) and (2) of section 9 of the Act.

146. Benami transactions are still fairly common especially in the west of the province, but they are rarely discovered at the time of registration, and Jhelum is the only district which reports their detection by a sub-registrar.

Income and expenditure.

147. The income from registration fees increased by 3 per cent. while there was a decrease in other receipts of 3 per cent. due to fewer applications for inspections and copies, the net increase of total income amounting to 2½ per cent. Expenditure was greater by 4 per cent. The increase in commission paid to registering officers is due to the increase in the number and value of the documents registered, and in the cost of establishment to increases in the number and pay of permanent and temporary clerks necessitated by the higher cost of living and the general increase of registration business.

The total income was Rs. 3,63,450: the total expenditure Rs. 1,40,221.

23-A.—Legal Affairs of Government.

148. The number of references for opinion disposed of by the Legal Remembrancer was 1,146 as compared with 910 in 1913 and 893 in 1912.

149. The Secretary of State was plaintiff in 11 original suits during the year. Of these 6 were decided in favour of Government, none against, and 5 remained pending at the close of the year. Of the six cases decided in favour of Government five were for possession of land and one was for the recovery of money. The total amount involved was Rs. 14,877-4-6.

150. The Secretary of State was defendant in 100 original actions including land acquisition cases. Of the 17 land acquisition cases, 16 were decided and one was withdrawn. The Collectors' awards were upheld in 11: while in 5 cases they were enhanced. The total enhancement amounted to Rs. 25,442-3-6. The amounts actually claimed by the owners above the Collectors' awards were over 3 lakhs.

151. Of the other 83 civil suits, 30 were decided in favour of, and 10 against the Government and 4 were compromised, whilst 39 remained pending at the close of the year.

The total amount involved was on account of—

		Rs.	A.	P.
(*a*)	Land acquisition cases, and ...	7,08,147	2	9
(*b*)	Other cases	3,25,880	11	3
	Total ...	10,34,027	14	0

In Class (*b*) above, the total amount claimed in decided cases was Rs. 1,45,644-10-10 out of which Rs. 9,580-11-10 only (including costs) was decreed against Government, whilst Rs. 1,273-12-2 was awarded to Government on account of costs in cases in which the plaintiffs' claims were totally dismissed. The Secretary of State was appellant in 8 appeals, of which 4 remained pending at the close of the year. One was decided in favour of, and 3 against Government. The Secretary of State was respondent in 34 appeals of which 17 were decided in the year, 14 being in favour of, and 3 against Government; while 17 remained pending at the close of the year. No original revenue suits or appeals were brought by Government. Two original revenue suits were brought against Government and remained undecided: the 3 appeals filed against Government were decided in favour of the latter.

152. During the year there was a marked increase in both the references for opinion and in the judicial work of the Department.

24.—District and Local Boards.

153. Contests occurred in the case of only one-fifth of the 185 vacancies which had to be filled. The working of most of the boards is reported to be satisfactory. The apathy which in many districts members are said to display can best be remedied by making them to some degree responsible for the efficiency of the administration of the boards, though this would involve a relaxation of official control which would at any rate for some time result in considerable administrative inefficiency. The extension of the system of sub-committees which has taken place during the year is therefore to be welcomed. Such committees not only relieve the proceedings at meetings of much of their tedium and leave more time for the discussion of larger questions of greater interest, but also bring home

to members their responsibilities as the authority in charge of the interests of the district in so many directions The general question of the constitution and powers of district boards and the devolution of authority to local boards or sub-committees is being examined in connection with the recent resolution of the Government of India declaring their policy in regard to the development of local self-government.

154. The demonstration farm of the Sialkot District Board which was started last year was handicapped by the unfavourable character of the season, but some success was attained, and the example is one which might with advantage be followed by other boards. The endowment of scholarships by certain boards to enable agriculturists to take the short practical course at the Lyallpur Agricultural College is a useful development which is welcomed by Government.

155. Industrial Schools were opened by the Gujranwala and Karnal Boards, and an industrial class was also started at Gujar Khan in the Rawalpindi District. The Industrial School at Kasur, which was started last year, is said to have improved very greatly.

156. The gross income of the district boards of the Province continues to expand and during the year amounted to Rs. 83,82,125, an increase of Rs. 2,16,757 on the income of the previous year. The total amount of Government grants was Rs. 2,27,276 greater than in 1913-14, and the local rate also produced Rs. 95,881 more, but these increases were to some extent counterbalanced by a considerable falling off in receipts from cattle fairs, sale of buildings and other property, and various other heads. Grants were made by Government to the amount of Rs. 32,50,606 : in addition, contributions payable by district boards to Government, which in the previous year had amounted to about Rs. 2,29,000, were remitted.

157. There was little progress in the provision of veterinary dispensaries during the year, but so much has been accomplished in past years that the scope for development is now limited. The increasing popularity of veterinary dispensaries in Shahpur, Rawalpindi and Attock is satisfactory, as these districts have hitherto been backward in appreciating the value of veterinary institutions.

158. The reports of the year furnish ample evidence of the increasing interest which is being taken in cattle-breeding throughout the province. The formation of new cattle-breeding sub-committees is reported from several districts, and the number of bulls purchased by the boards from Hissar and elsewhere was considerable.

159. The problem of rural sanitation is now under the consideration of Government. The views of the boards with regard to certain tentative proposals, which were made in a resolution of Government on the subject, have been received, and naturally very divergent opinions have been expressed. Signs are not, however, wanting that in certain parts of the Province there is a very real desire to improve the sanitary condition of villages and rural areas, and indeed in some districts practical steps have already been taken towards the realization of this desire. These are indeed but small beginnings, but they are regarded by Government as signs of progress and as justifying the further encouragement of rural sanitation by investing boards by regulation or legislation with powers to enforce elementary rules of hygiene.

25.—Municipal Administration.

160. The steadily increasing interest which is being taken in municipal elections is shown by the number of vacancies contested, which rose from 37·3 per cent. in the previous year to 46 per cent. It is reported that only in a few cases was the keenness of the contest due to sectarian rivalry and this is a matter of satisfaction, for where religious differences

run high the administration of municipalities inevitably suffers, and interest in elections unaccompanied by subsequent interest in the proceedings of the members elected is of no great value.

161. The unenviable reputation of Rohtak, with regard to malpractices at elections, was again maintained, and the Deputy Commissioner actually reports that all the candidates withdrew owing to the high prices which were demanded for votes. The low conception of civic morality, which this fact indicates, is one of the causes of the slow progress of municipal institutions in many places, and must be deplored by all who have at heart the progress of local self-government. With few exceptions the number of meetings held was adequate, and attendance of members was satisfactory.

162. The working of most committees was satisfactory, though there is a very general complaint in the Jullundur and Multan Divisions of the inefficiency of municipal offices evidenced by a disregard of rules and regulations. The very real spirit of progress which exists in municipal administration is evidenced by the demand for better conditions of life in towns, for improved systems of sanitation, for stricter control of food and water-supplies, and generally for the amenities of modern life; however this is combined with an easy toleration of bad roads and insanitary surroundings which closer supervision by municipal bodies and their staffs could remedy at very small cost.

163. The aggregate income of municipalities again rose from Rs. 76,46,000 in the previous year to Rs. 82,92,902. Excluding loans and deposits, however, there was a considerable decrease amounting to about Rs. 2,35,000, chiefly owing to falling off in the income from octroi due to the war.

164. The improvement of urban sanitation continues to rank in the forefront of municipal activities. The appointment of duly qualified Health Officers, paid in whole or in part by Government, and of Sanitary Inspectors, upon which Government insisted last year, has received the attention of most of the committees concerned, and the posts have in most cases been filled. Numerous schemes for the improvement of drainage and water-supply are in progress, and to all such Government has been prepared to contribute generously, but on the principle always of helping those who help themselves, for it is considered that committees should not be encouraged to look to Government to provide amenities for which they are not prepared to pay if necessary by an increase of taxation.

165. A special feature of the year was the opening of cheap grain shops by several municipalities to relieve the high prices prevalent last cold weather, and Government in the special circumstances created by the war contributed a share of the cost through the Provincial Branch of the Imperial Relief Fund. There is reason to believe that these cheap grain shops did much to ease the situation in the larger towns.

Taxation.

166. Sixty-one per cent. of the total income of municipalities excluding loans and grants from Government was derived from octroi. This source of revenue shows but little tendency to expand, and in fact was slightly less in the year under review than in 1909-10. The question of the substitution of terminal taxation for octroi has been under consideration in several municipalities: it has actually been sanctioned in Sargodha and has been introduced since the close of the year. In Muktsar and Fazilka its imposition has been sanctioned by the Government of India in principle, though final orders have not yet been passed. During the year there was little extension of taxation. Octroi was imposed for the first time in the new town of Dera Ghazi Khan where a site tax was also sanctioned, and the octroi schedules were revised in Simla, Rohtak and Urmar-Tanda.

PROTECTION. Strength and Distribution of Volunteer Forces.

26.—Military (Volunteers)

167. The strength of the Volunteer Corps on the 31st March 1915 is reported to have been as follows :—

Corps.	Company.	Stations.	Officers.	Non-Commissioned Officers.	Privates or troopers.	Total enrolled strength.	Total number of efficients.	Sergeant-Instructors.	Remarks.
Punjab Light Horse.	...	Field Officers and Staff	8	...	...	8	...	3	
	A	Lahore ...	5	27	169	201	200	...	
	B	Ambala ...	1	7	40	48	47	...	
	C	Rawalpindi ...	3	10	54	67	67	...	
	D R½	Peshawar ...	...	4	18	22	21	...	
	D L½	Amritsar ...	2	3	18	23	23	...	
	Detachment	Delhi ...	4	9	43	56	54	...	
	E	Lyallpur ...	...	4	18	22	22	...	
		Multan ...			5	5	5	...	
		Sargodha ...		2	7	9	9	...	
		Montgomery ...			8	8	8	...	
	...	Reservists ...	1	...	81	82	82	...	
	...	Add for Supernumerary Officers.	9	...	...	9	...	...	
		Total ...	33	66	461	560	538	3	
1st Punjab Volunteer Rifles.	...	Field Officers and Staff	12	...	...	12	...	3	
	A, B, C and Cadet ½ Company	Lahore ...	11	29	286	326	326	...	
	D	Rawalpindi ...	2	7	111	120	119	...	
	E	Amritsar ...	3	9	63	75	70	...	
	F	Delhi ...	4	9	100	113	106	...	
	G	Murree ...	2	8	84	94	94	...	
	H	Do. ...	1	9	68	78	78	...	
	I	Peshawar ...	3	18	115	136	136	...	
	K	Ferozepore ...	4	9	107	120	120	...	
	L	Srinagar ...	4	10	51	65	64	...	
	M	Sialkot ...	1	4	43	48	48	...	
	N	Delhi ...	1	1	29	31	31	...	
	...	Reservists ...	1	...	145	146	144	...	
	...	Add for Supernumerary Officers.	14	...	...	14	...	...	
		Total ...	63	113	1,202*	1,378	1,336	8	
Simla Volunteer Rifles.	...	Field Officers and Staff	9	...	...	9	...	4	
	A, B, C, D, E and H	Simla ...	20	60	420	500	440	...	
	F and G	Sanawar ...	2	15	140	157	157	...	
	...	Reservists ...	2	...	90	92	35	...	
	...	Add for Supernumerary Officers.	18	...	...	18	...	...	
		Total ...	51	75	650	776	632	4	
North-Western Railway Volunteer Rifles.	...	Field Officers and Staff	10	...	...	10	...	5	
	A, B, C and D	Lahore ...	13	42	524	579	573	...	
	E	Ambala ...	2	7	156	165	165	...	
	F	Saharanpur ...	2	8	132	142	142	...	
	G	Rawalpindi ...	3	20	168	191	191	...	
	...	Reservists ...	...	...	13	13	13	...	
	...	Add for Supernumerary Officers.	...	...	...	...	...	...	
		Total ...	30	77	993	1,100	1,084	5	

The Punjab Light Horse, the 1st Punjab Volunteer Rifles, and the North-Western Railway Volunteer Rifles were inspected in February 1915 and the Simla Volunteer Rifle Corps in June 1914.

The results were considered satisfactory.

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CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS

Agriculture —(1) Report on the operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1915.
(2) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1914-15.
(3) Annual Report of the Government Cattle Farm at Hissar for the year 1914 15.
(4) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1914.
(5) Report on the working of Co-operative Credit Societies for the year ending 31st March 1915.
(6) Report of the Department of Fisheries for the year ending 1st June 1915.

Weather and Crops.—(1) Report on the weather of the Punjab for the year 1914-15.
(2) Punjab Season and Crops Report for 1914-15.

Horticulture.—Report on the Government Agri-Horticultural Gardens, Lahore, for the year ending 31st March 1915.

Forests.—(1) Progress Report of Forest Administration in the Punjab for 1914-15.
(2) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1914-15.

Arboriculture.—Progress Report on Arboriculture in the Punjab for the triennial period 1911-12 to 1913-14.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1914.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year ending March 31st, 1915.
(2) Report on the Internal Land Trade of the Punjab for the year 1914-15.
(3) Report on the Joint Stock Companies in the Punjab for the year 1914-15.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1914-15.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1914-15.
(2) Land Revenue Report as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—(1) Statistics of British India, Part II, Commercial (Co-operative Credit Societies).
(2) Administration Report of the Army Remount Department in India for the year 1912-13.

Crops.—(1) Agricultural Statistics of India, volume I, tables 2-I and 3-I.
(2) Area and yield of certain principal crops in India.
(3) Prices and wages in India.
(4) Variations in Indian Price Levels, 1914.

Forests —Statistics of British India, Part IV (*b*), Finance and Revenue.

Mines and Quarries —(1) Statistics of British India, Part I, Industrial.
(2) Records of the Geological Survey of India, volume XLIII, part 2.
(3) Report of the Chief Inspector of Mines in India under the Indian Mines Act (VIII of 1901) for the year ending 31st December 1914.

Manufactures.—Statistics of British India, Part I, Industrial.

Trade.—(1) Accounts of the Trade carried by Rail and River in India.
(2) Statistics of British India, Part II, Commercial (Joint Stock Companies).

Railways.—Administration Report on Railways in India for the year 1914-15.

Irrigation.—Statistics of British India, Part III, Commercial Services.

PRODUCTION AND DISTRIBUTION.

27.—Agriculture.

SCIENTIFIC.

General.

168. Mr. Miller Brownlie, the Agricultural Engineer, whose appointment was sanctioned last year, took charge of his duties in February. He is available for consultation in all branches of Agricultural Engineering and is assisting the people by giving them advice in the sinking of tube wells and the introduction of pumping plants. His appointment has met a pressing need of the agriculturists of the Punjab and the larger zamindars of the Province are already beginning to avail themselves of his services.

169. Sardar Darshan Singh, Deputy Director of Agriculture, took charge of the new Cotton Farm at Hansi in October 1914. Mr. O. T. Faulkner, the newly appointed Deputy Director of Agriculture, joined the department in October and is being trained at Lyallpur under the Professor of Agriculture and the Principal of the College. He will be in charge of the new wheat farm to be established shortly in the great wheat tract in the north of the Punjab. M. Charan Singh, who was appointed Assistant Director of Agriculture two years ago, has been placed in charge of the Chunian and Lower Bari Doab Colonies.

Lyallpur College.

170. The College course has been completely changed from the College year which began in July 1914. Briefly, the change consists in substituting a four-year course in two parts for the old three-year course. The first part of the new course lasts two years and is confined almost entirely to practical agriculture. The second two years will be devoted mainly to the sciences underlying agriculture. This change in the syllabus, the improved prospects for students and the lowering of the cost of education have all operated beneficially in recruiting and in October 1914 a first year class of 23 students was formed: in October 1913 there were no first year students at all.

171. The attendance in the vernacular class, which was only started in 1913, numbered 16 in 1914. The students were of the best type for this class of instruction—all sons of zamindars. The fees for this class have now been reduced and an inclusive fee of Rs. 5 only per head for hostel accommodation, board and tuition is charged. As a number of public-spirited gentlemen and some district boards have offered scholarships, the education of students in this class will be practically free, and it is hoped to have a considerably larger class this year. Besides these two classes, a new departure was made last winter in extending the class for Assistant Commissioners in Indian rural economy so as to include a small number of Canal officers, Extra Assistant Commissioners, and Canal zilladars. The following table gives the classified list of students attending the Agricultural College in 1914-15:—

Europeans	8
Muhammadans	16
Hindus	28
Sikhs	23
Total ...	75

172. This year 120 applications for admission into the two years' course were received: the present first year class (selected out of them) numbers 32.

173. In 1914 the Government research scholarship was awarded to Bhai Kartar Singh, who is now studying dairying and the milk supply of Indian cities. In short, the College has had a satisfactory year and the new syllabus is working smoothly and gives promise of being both popular and useful.

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Experiment and Research.

174. Valuable work in chemical research continues to be done at the laboratory of the College and the Narwala Reh Farm. The Narwala experiment on the reclamation of alkali-infected soil is very promising. The wheat grown last winter on the land treated exceeded considerably in outturn the average crop for the Colony as a whole. The experimental work done on our farms produced many useful and instructive results: a brief mention is made of the more important. Experiments in wheat showed that Punjab 11 wheat is best suited to the canal colonies, while Pusa 12 is well adapted to the unirrigated parts of the Province. The sugarcane experiments show that the cane grown in Karnal in the east of the Province is superior in outturn to that grown at Gurdaspur, while the experience hitherto gained with artificial manures shows that none can be used profitably in the province at present.

District or Demonstration Work.

175. This work is confined to the Chenab and Lower Bari Doab Colonies and Gurdaspur, Jullundur, Hoshiarpur, Ferozepore and Hissar Districts. Work is also carried on, but to a less extent, in the Jhelum Colony, and in Gujrat, Sialkot and Attock. Agricultural associations exist in Gurdaspur, Jullundur, Hoshiarpur, Lyallpur, Gujrat and Ferozepore. They are continuing to work satisfactorily.

Implements.

176. The improved implements advocated are increasing in popularity with the cultivators. Nine hundred and seventy-five improved agricultural implements of all sorts were sold during 1914-15, compared with an average of 346 sold during the last five years. In addition, some 300 implements of sorts are out on loan. Although the reaper is a costly machine it is economical in canal-irrigated tracts. Messrs. Volkart Bros. sold all the thirty they had in stock and could have sold more had they been procurable.

Storage and Distribution of Seed.

Wheat.

177. The following areas were last rabi under wheat seed distributed by the department in only six districts:—

Type of wheat.					*Area in acres.*
Punjab	11	...	...	...	6,637
Punjab	13	...	...	...	706
Punjab	14	...	...	...	438
Pusa	12	...	...	...	702

The Professor of Agriculture hopes to have at least 18,000 acres under Punjab 11, in the Chenab Colony, this winter. In Jullundur, Gurdaspur and Hoshiarpur over 2,300 maunds of seed were cleaned and stored by the department and about the same amount is being stored in the Jhelum Colony.

Cotton.

178. In 1914 over 2,000 acres of 4-F American cotton were grown from seed which the department sold in the Chenab Colony: and about 4,000 acres in the Jhelum Colony. The produce (the sale of which the department supervised) fetched a premium of between Rs. 2-5-0 and Rs. 2-8-0 a maund over country cotton. The areas under this cotton this year have been considerably increased: it is estimated that about 6,000 acres is under this cotton this year in the Chenab Colony and 1,500 acres in the Jhelum Colony, in addition to a small area in Montgomery.

Beisdes the activities mentioned above a good deal of minor work has been done during the year in other directions.

Entomology.

179. The treatment of the moth-borer in young sugarcane by cutting the "dead heart" of the plant out is successful and is increasing in popularity.

Sericulture.

180. The department distributed 165 ounces of fresh seed this year against 136 ounces issued last year. In addition to this seed 374 ounces of seed were imported from France for Shaikh Ghulam Sadiq of Amritsar for distribution among his Gurdaspur rearers.

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Date Palms.

181. The date palms are doing very well in the south-east of the Province, particularly Muzaffargarh, though the rains last year did considerable damage.

Well-boring.

182. During the year boring work has been carried on in 11 districts, a total of 237 wells having been bored. Six trial borings were made. An increase in water-supply was obtained in 141 of the wells. The percentage of success—59½—is not unsatisfactory, but efforts to increase it are being made.

Loans to Agriculturists.

183. The total of advances made during year under both Acts was Rs. 5,86,250 as compared with 7½ lakhs in the preceding year.

184. Rupees 3,23,365 were advanced for land improvements or three-quarters of a lakh more than in the preceding year. Most of the increase is accounted for by Ferozepore which took over a lakh or one-third of the provincial total. The principal outstanding at the beginning of the year was Rs. 14,63,750 and at the end Rs. 15,65,470. As between the Imperial and Provincial Governments the net financial result to the Punjab on the transactions of the year was a gain of Rs. 33,856. The profit is less than in the preceding year, as the amount outstanding has risen considerably and interest is not usually payable till the improvement begins to yield a return to the borrower.

185. Owing to harvests not being unsatisfactory, the demand for loans under Act XII of 1884 was not keen. The amount advanced was Rs. 2,62,885 as compared with upwards of 5 lakhs in the previous year. Loans were taken mostly for the purchase of cattle and were seldom required for the provision of seed. The outstanding balance of advances has been reduced from Rs. 6,34,941 to Rs. 4,97,652 and the year's working resulted in a profit of Rs. 10,464 to the Provincial Government.

Co-operative Societies.

General.

186. The difficulties of the previous years, caused by the banking crisis, were intensified during the past year (August 1st, 1914, to July 31st, 1915) by the outbreak of war. There was a disposition on the part of depositors to withdraw their deposits, while there was a falling off in fresh deposits. The kharif harvest was greatly below the average and the prices of cotton extraordinarily low; consequently members of societies, so far from being able to repay their loans were obliged to borrow some 10 lakhs from the money-lender. The rabi harvest, which promised to be exceptionally good, did not realize expectations and as the summer rains failed members were obliged to keep their grain for food. There has thus been a general stagnation in the business done by the different classes of societies.

187. In these circumstances it was not possible to increase the number of societies. Seventy new societies were started and 66 ceased working. The number of members has been reduced by the striking off of a number who are not shareholders. Working capital remains much the same as in the previous year. The total figures at the end of the year were :—

	Number.	Members.	Working capital.
			Rs.
Central Societies	40	2,585	53,02,181
Agricultural Societies ...	3,267	154,065	1,36,63,843
Non-agricultural Societies ...	30	2,354	1,84,647

Central Societies.

188. There are 20 Central Banks and 20 Banking Unions. In the Central Banks both individuals and societies are shareholders, individuals predominating. Two additions were made to their number during the past

year, *viz.*, the Fazilka Central Bank (Ferozepore District) and the Punjab Government Servants' Society (Lahore District), formerly classed as a non-agricultural society.

189. In spite of apprehensions there was no serious withdrawal of deposits from the Central Banks, loans and deposits at the end of the year being Rs. 24,71,900 as against Rs. 23,96,076 at the end of the previous year, but as the Central Banks were obliged to keep large cash balances to meet possible withdrawals of deposits they were only able to advance 6 lakhs to village societies as against 15 lakhs in the previous year. The share capital of the Central Banks is satisfactory, being 17·3 per cent. of the working capital, but their reserve funds are very small and insufficient to meet a difficult situation.

190. The condition of the Banking Unions resembled that of the Central Banks, but they were able to give more help relatively to the village societies than the Central Banks.

191. Withdrawal of deposits exceeded receipts by more than 7 lakhs, but this deficiency was more than compensated for by additional share capital. The actual working capital is now Rs. 1,24,34,956 composed as follows :— **Agricultural Societies.**

	Rs.
Shares	37,37,581
Members' deposits	13,19,869
Non-members' deposits	17,80,815
Loans from Central Societies	40,67,662
Loans from Government	68,529
Profits invested	1,93,624
Profits not invested	12,66,876

This working capital is utilized as follows :—

	Rs.
Cash in hand	7,66,815
Investments	1,93 624
Loans to members	1,14,42,179
Stock	32,336
Other items	2

The Societies' own money (shares and profits) forms nearly 42 per cent. of the working capital.

192. For the reasons given above repayment of loans fell short of the amount repaid in the previous year by nearly 10 lakhs, being Rs. 30½ lakhs as compared with Rs. 40 lakhs. The amount repaid was 19 lakhs less than the amount fixed for repayment by members just before the rabi harvest, at a time when crop prospects were very favourable.

193. Figures from the societies' ledgers show that since Co-operative Societies were started in this province 69½ lakhs of old debts have been paid off by means of loans taken from the societies and 12½ lakhs of mortgage money, resulting in the redemption of some 8,000 acres of land. The fact that this large amount of money has been advanced in the form of long-term loans is one of the reasons for repayments of loans not being more than they are.

194. At the present time each society possesses an average of Rs. 4,000, allowing an average of Rs. 81 as available for loan to each member. This amount of money is sufficient for the requirements of members, provided it comes into sufficiently active circulation.

195. The societies contributed Rs. 67,762 from their profits towards the Indian Imperial Relief Fund, in addition to furnishing a hospital at Jullundur for wounded soldiers and supplying 50 beds for the St. John's Ambulance.

196. There have been no fresh developments during the past year which deserve notice. **Non-agricultural Societies and other forms of co-operation.**

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Veterinary and Live-stock.

General.

197. The department is steadily gaining the confidence of the people in a greater degree. Thus there are this year more hospitals than last, more castrations were performed, more inoculations effected, and more patients treated at the veterinary hospitals.

198. The College is now in its new and commodious buildings. The move has had a harmful effect on the number of patients brought for treatment to the college, but this doubtless is only temporary. Considering the extraordinary difficulties under which the college worked during the year the results are very satisfactory. Most of the teaching work, lectures, etc., had to be done in the open air, the classes being surrounded by workmen demolishing buildings. In these circumstances, it is but natural that the training of the last year's students suffered somewhat, but, in spite of this, the percentages of passes are only slightly lower than last year. To impart veterinary education of a higher standard at the College sanction has been given for a post-graduate course of one year's instruction in English : this class will be commenced at the beginning of October 1915.

Hospitals.

199. At the close of the year there were 120 hospitals in the province as against 114 last year, the number of cases treated at them having risen from 301,847 during 1913-14 to 317,802 this year. Many Indian gentlemen have offered to build and equip hospitals at their own expense : others have given land to be used as a site for the buildings.

Miscellaneous.

200. The system of instructing Veterinary Inspectors and Veterinary Assistants by means of local conferences adopted last year is proving most successful. During the year meetings were held at Lahore, Gurdaspur, Amritsar, Lyallpur and Ferozepore. The Chief Superintendent has observed a distinct improvement in professional knowledge amongst the old Veterinary Assistants. As during the past year the Department has been giving lectures and demonstrations on veterinary matters in villages, the people are now awakening to the fact that it can and will do a great deal for their cattle if they will only report outbreaks of contagious diseases more punctually, and also take their animals to the hospital for treatment before they get beyond the hope of recovery.

201. During the year 10,767 villages were visited by different members of the veterinary staff on tour and 79,168 animals were treated and castrations performed as against 11,522 villages visited and 102,447 animals treated in 1913-14. This slight decrease is due to temporary weakness of the staff on account of the withdrawal of 27 Veterinary Assistants to military service.

202. Excellent progress continues to be made in cattle-breeding, and the people show an ever-increasing tendency to act on the advice of the officers of the Department. Sheep-breeding is growing in popularity and the demand for three-quarter bred merino sheep is increasing.

Government Cattle Farm, Hissar.

203. The Hissar Cattle Farm is maintained by the Local Government and is in charge of an officer of the Civil Veterinary Department.

The objects of the farm are two-fold :—

(1) to supply military requirements in bullock and mules :

(2) to improve the cattle, donkeys, mules and sheep of the Punjab by the issue of high class bulls, donkeys and rams for breeding.

The farm includes some 2,300 acres of cultivation, most of which is under oats, chari (*sorghum vulgare*) and lucerne. Modern ploughs and reaping and threshing machines are used. Chari is siloed in large quantities. There is a large gram store house fitted with an elevator and conveyor bands : and some 10,000 to 20,000 maunds of hay are made in a favourable year.

204. The working of the farm has been satisfactory in spite of severe outbreaks of rinderpest and haemorrhagic septicæmia. The total

receipts rose from Rs. 97,388 to Rs. 1,09,374 and the value of stock from Rs. 5,28,234 to Rs. 5,56,776. Eight hundred and forty-five animals of all sorts were sold during the year as compared with 554 sold in 1913-14, and the farm was able to supply as many as 171 bulls to district boards in the province. There has been a considerable amount of disease on the farm, but good management has prevented a heavier mortality.

CAMEL SPECIALIST.

205. From the beginning of the financial year 1912-13 the control of the Camel Specialist was vested in the Punjab Government : during the year under report the appointment was made permanent. A large number of observations and experiments on treatment of surra, antifly-emulsions, and different camel diseases were carried out. Ninety-eight surra-infected camels belonging to the military authorities were cured during the year, which, at an average price of Rs. 140, represented a saving to Government of Rs. 13,720, as all these camels if they had not been treated would, of necessity, have been destroyed. Some 9,000 camels under the Military Department were tested for surra : and 197 camels belonging to private persons were treated for different diseases.

A printed note on surra in camels has been issued and widely circulated.

The total expenditure incurred during the year was Rs. 27,923-3-1 as compared with Rs. 26,047-12-1 last year.

27-A.—Fisheries.

206. Fishery Regulations have been drafted for the Mandi and Suket States and the Suket Regulation has become law. A licensing scheme has been worked out for the Kangra District for the control of fishing by nets and *chhips*. The stock of fish in the sanctuaries has very largely increased.

207. The case of the Gurdaspur fisheries has been investigated. The present system of leasing them to monopolists has nothing to recommend it. But there seems no reason to doubt that, as in the hills so in the plains, systems of conservancy can be evolved which when completed will make the Fisheries Department as a whole self-supporting from the first, and ultimately a source of revenue, and will at the same time protect the fishermen in their industry.

208. Fish culture in the Chenawan and Sukian Murral Ponds and the Madhopur Fish Farm has during the year under report been in the stage of observation and experiment. Deposits of salt seem likely to interfere with the prospects of stocking the Nammal lake. One hundred and sixteen miles of trout water in the hills have stocked and the fish appear to be spawning naturally.

28.—Weather and Crops.

Character of the season.

209. The rainfall in the Punjab, with the exception of the south-east dry area, was above normal during the months of February, April and May. The north and west of the Province, in particular, profited. Conditions were thus generally favourable for sowings of cane and irrigated cotton. The monsoon set in early, about the end of the third week of June, giving sufficient moisture for unirrigated sowings everywhere except in parts of the south-east. It was more active than usual during the greater part of July, and heavy and widespread precipitation occurred during the latter half of that month. Good rain also fell during the first ten days of August, after which a long break ensued. This was at first beneficial, the July rainfall having been excessive ; but the interval was too prolonged, and was followed by excessively heavy rain in the second and third weeks of September. Taken as a whole, however, the monsoon rainfall of 1914 was favourably distributed. Proportionately, the Multan Division was most liberally treated, Dera Ghazi Khan recording 2½ times its average rainfall and nearly every other district of the division receiving

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double its usual quantity. In the rest of the Province the excess ranged from 20 per cent. up to as much as 50 per cent. in Jullundur, Gurdaspur and Lahore. There were only four exceptions to the general good fortune: Rawalpindi having to rest content with a 10 per cent. excess, while Sialkot, Jhelum and Gujrat suffered from actual deficiency which was serious only in the case of the last named.

210. Winter disturbances appearing unusually early gave abnormally heavy rain, followed by hail and low temperatures, in October and November, with the result that considerable havoc was done to cotton and autumn cereals. The rain in the beginning of August and mid-September left abundance of moisture in the soil for the sowing of the spring crop. In December precipitation was normal, but in January in defect: so that the condition of the unirrigated crops began to cause some anxiety. This was relieved by heavy and widespread rain in the second and third weeks of February and the second week of March. The unirrigated crop in the south-east and west especially benefited, and generally showed exceptional promise. The rest of March was fine, but was succeeded by very unsettled weather (including thunder-storms) in the first fortnight of April. The result was damage to the crop in the sub-montane and central tract. The clear but unusually hot weather which followed, while favourable to harvesting operations, had in parts of the Province an adverse effect on the outturn.

Sown and cropped areas.

211. Owing to favourable conditions at seed time the total sown area was 16 per cent. greater than in the previous year and 13 per cent. higher than the normal, while the total matured area showed advances of 23 and 21 per cent., respectively, on the previous year on the normal.

Chief staples.

212. The sown area of wheat amounted to 9,915,507 acres—an increase of 17 per cent. on last year and 16 per cent. better than the normal. This expansion is to be attributed to the contraction in the sowings of cotton, rise in prices due to the war and an exceptionally favourable season. Nearly the whole increase was in unirrigated area which represented 54 per cent. of the whole. Except for the unseasonable weather late in March and early in April the season was favourable and the total outturn is estimated at 3,396,453 tons or 32 per cent. above the normal, the percentage for irrigated and unirrigated wheat, respectively, being 116 and 159.

213. The outturn of the other principal crops as compared with the estimated normal outturn is given in the following table:—

Name of crop.	Outturn in percentage of estimated normal.
Gram	163
Barley	116
Cotton	134
Jowar	60
Rice	116
Bajra	104
Maize	67
Sugarcane	96
Oilseeds	102

214. The total irrigated area was 11¾ million acres or 37 per cent. of the sown area. This is equal to the figures of last year. Of the total irrigated area 64 per cent. was flushed from Government canals.

Harvest prices.

215. The most important variations in the harvest prices of the valuable staples were in cotton, sugar and wheat. The first named was most affected by the war and the fall from an average of Rs. 6-11-0 to Rs. 4-4-0 owing to contraction in exports is remarkable. Raw sugar rose

from Rs. 4-2-0 per maund to Rs. 4-6-0, the increase being of course accounted for by the decline in imports. Wheat averaged Rs. 3-8-0 against Rs. 3-2-0 last year. The rise was less than might have been expected but for the special conditions attaching to exports. The harvest prices of the cheaper kharif food-grains such as jowar, bajra, and maize were generally considerably higher than in the previous twelve months. The average prices of gram and barley, on the other hand, declined, respectively, from Rs. 2-15-0 and Rs. 2-6-0 last year to Rs. 2-12-0 and Rs. 2-5-0 owing to the drop in export to the United Provinces and foreign countries and to the success of the harvests. The fall in the price of rapeseed from Rs. 5-8-0 to Rs. 4-6-0, due to the falling off in the demand, was particularly marked.

216. Stocks of grain are said to be generally sufficient, and several districts report that large quantities are being kept off the market on speculation for a substantial rise in prices.

29 —Horticulture.

217. There was a decrease of Rs. 295 in the income from the sale of garden produce compared with last year and an increase of about Rs. 7,000 in expenditure. The increase was principally due to improvements carried out on the mounds, the purchase of a new watering cart, and the considerable amount of cleaning, levelling and grassing done in the gardens. Agri-Horticultural Gardens, Lahore.

218. Progress was made in several directions during the year. The roads are now lit by electricity and the dust nuisance has been diminished. The reclamation and planting of the unsightly plot known as Dhoop Sarai is a marked improvement. The growth made by eucalyptus rudis is very striking.

219. There are 23 boys in the three gardening classes as against 25 in the last year. Five boys were promoted from the Mali to the Chaudhri class; two of them accepted outside posts, one in the Canal Department, and the other in a Native State, before completing their Chaudhri class course. The Chaudhri class turned out two successful candidates, one of whom secured the post of an Arboriculture Darogha under a district board and the other a Chaudhri's post in a Native State.

30.—Forests.

220. The area of Departmental Reserved Forests decreased by 161 acres. In Multan 19,290 acres (30 square miles) were notified as Reserved Forest for Khanewal plantation. Fifty-eight acres were gained by river action, 70 acres by rectification of boundaries. In Montgomery Division 11,055 acres (17 square miles) were given up for colonization purposes, 7,894 acres were transferred to Unclassed Forests and there was a further decrease of 630 acres due to various causes. Alteration in area.

221. There was a net decrease of 794,724 acres in the area of Protected Forests due principally to the transfer of large areas to the head of Unclassed Forests preparatory to colonization: in addition rather more than 50,000 acres in the Nurpur Tahsil, Kangra District, were transferred to the management of the Deputy Commissioner.

222. There was a net decrease of 257 acres in the area of Leased Forests, principally due to the grant of small areas for cultivation in the Bashahr State.

223. The total area of the different classes of Forests under the Forest Department at the close of the year was:—

	Acres.	*Square miles.*
Reserved Forests	1,151,832	1,800
Protected „	2,535,012	3,961
Unclassed State Forests	1,351,397	2,111
Local Forests	233,672	365
Total ...	5,271,917	8,237

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Of this 1,257,891 acres contain tree growth, while 4,014,022 acres are practically without forest tree growth.

Forest Settlements.

224. An area of 19,290 acres (30 square miles) near Khanewal in Multan Division was notified as Reserved Forest under Section 19 of the Indian Forest Act with a view to the formation of an irrigated plantation. The settlement of the area to be reserved for the Chichawatni irrigated plantation (Montgomery Division) was not completed by the close of the year. The revision of the Sutlej Valley Forest Settlement, affecting the Leased Forests of the Bashahr State, still remained in abeyance, as there was no officer available for the work.

Demarcation.

225. During the year there was a net decrease of 73 miles in the total length of boundaries artificially demarcated, which was mainly due to abandonment of area in the Montgomery Division for colonization purposes and to the transfer of certain Protected Forests in the Kangra Division to the management of the Civil Department. The total expenditure on demarcation during the year was Rs. 3,898 as against Rs. 3,354 in the year 1913-14.

Surveys.

226. During the year no survey was undertaken by the Survey Department and no expenditure on account of Forest Surveys was debited to the Forest Department.

Working Plans.

227. No new Working Plans were sanctioned during the year, but the revision of the Murree-Kahuta Working Plan, which provides for double the yield of the old plan, was completed and acted upon. The Browsing Schemes for Silladar Camel Corps, which were under consideration last year, made as much progress as could be expected in view of the necessity of referring each scheme to a number of different authorities. All the schemes should be ready before the end of next year.

228. Some progress was made during the year on the revision of the Kangra Working Plan which cannot be completed, however, in less than two years. Considerable progress was made with the revision of the Dharmsala Municipal Forests Working Plan and it is hoped to finish the plan by the cold weather of 1915-16. The completion of the Pabar Valley Working Plan was delayed as Mr. Gibson was fully occupied in the Simla and Resin Divisions. The provisions of the Working Plans were generally worked up to. No preliminary Working Plan reports were prepared or sanctioned during the year. Plans of Operations were drawn up, as usual, for all forests and their provisions were generally carried out.

Communications and buildings (roads and bridges).

229. Ten miles of cart roads and 58 miles of paths were constructed during the year as compared with 40 miles of cart roads and 94 miles of paths in the previous year ; while 1,205 miles of roads and paths were repaired against 1,181 miles repaired in 1913-14. The total expenditure amounted to Rs. 46,205 as against Rs. 53,026 and Rs. 32,510 during the two preceding years.

Buildings.

230. The total expenditure on buildings during the year amounted to Rs. 69,533 against Rs. 62,584 in the previous year. Of this Rs. 53,869 were spent on new works, Rs. 10,968 on repairs and the balance on building material and temporary establishment. The increase is mainly due to the construction of new Resin Factory buildings at Jallo to replace those damaged by floods at Shahdara and to accommodate the new distillery plant purchased last year.

General protection.

231. The total number of cases of Forest offences reported during the year was 9,736 as compared with 11,951 cases during 1913-14 and 10,386 the average of the three preceding years : there was thus a decrease of 2,215 cases as compared with last year's figures and of 650 cases as compared with the past three years' average.

232. Fire cases show an increase over last year's figures of 142 cases, the increase being almost entirely in Rawalpindi and Kangra Divisions where there was a serious outbreak of incendiarism, which formed the subject of careful investigation at the close of the year. The number of

cases taken into court was 914 against 908 in 1913-14. Convictions were obtained in 823 cases which gives a percentage of 89·94 as compared with 88·11 in the previous year. The protection of forests in Kangra and Rawalpindi Divisions has been facilitated to some extent by the heavy punishments awarded by the Courts. Under Section 67 of the Indian Forest Act 8,451 cases involving 12,045 persons were compounded during the year for Rs. 34,826.

Fire protection.

233. The year has been most unfavourable for fire protection as the area burnt was 41,578 acres (65 square miles), being the highest on record since 1895-96. The main increase was in Rawalpindi and Kangra Divisions. In the former Division 17,873 acres were burnt as against 10 acres in 1913-14 and in the latter Division 15,268 acres as compared with 1,910 acres in the previous year. Three hundred and two fires occurred during the year. The percentage of area burnt to the total area under the Forest Department was 0·8 as compared with 0 1 in 1913-14. In Kangra the fires were probably lit to obtain fresh grass, while it is possible that a serious outbreak of incendiarism in the Siran Forests of the Hazara District, bordering on the Murree Tahsil, caused the Rawalpindi villagers to follow the bad example set them by their neighbours

Protection from cattle.

234. Of the total area of 8,237 square miles under the charge of the Forest Department 1,398 square miles were entirely or partially closed to grazing, or 16·97 per cent. of the total as compared with 17·25 per cent. in 1913-14. The area closed to all animals rose from 515 square miles to 528 square miles The number of cattle impounded during the year under report was 14,761 as against 19,740 in 1913-14.

Reproduction (Natural and Artificial).

235. (*i*) *Natural.*—In coniferous forests the year under report proved a poor seed year for all species and in the case of Chir it was a failure throughout the province. Natural reproduction of broad-leaved species from seed was generally adequate wherever it was possible to prevent overgrazing. The same was the case with Coppice reproduction.

236. (*ii*) *Artificial.*—In Chichawatni plantation 504 acres were operated upon and secondary *khals*, pasels and trenches were excavated in this area at a cost of Rs 5,591 The net area trenched but unsown at the close of the previous year was 469 acres and 504 acres were trenched during the year, making a total of 973 acres available for sowing. Of this 433 acres were sown during the year, leaving a balance of 540 acres unsown at the close of the year. The total expenditure on sowing was Rs. 916. The supply of water was most erratic and gave cause for considerable anxiety as to the success of the work.

237. In Kot Lakhpat plantation 155 acres were sown during the year, 2,148 acres with shisham by the trench system and 7 acres with kikar after ploughing. The shisham sowings were all successful except on various small patches of "Kallar", while kikar as usual completely failed. The water-supply being unsatisfactory, sowings could only be carried out on a reduced scale. The total expenditure on the plantation during the year was Rs. 4,169, while the revenue realised was Rs. 3,154.

238. In the Pabbi Forest 485 acres were trenched and sown with the seed of "Phulai," "Sanatha," "Pathaki" and "Sakur." The total expenditure in the Pabbi amounted to Rs. 862.

Cultural operations.

239. Cultural operations on a small scale were conducted in all the divisions, hills and plains. The opening balance of the areas under treatment was 4,752 acres : the additional areas treated were 848 acres : 115 acres were transferred to "forest," 11 acres "burnt" and 2,309 acres struck off as failures. Excluding the expenditure on Chichawatni and Kot Lakhpat plantations and the Pabbi, the total expenditure on new works was Rs. 1,628.

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Experiments.

240. Various species of eucalyptus were given trial, but experiments on an extensive scale were made only in the Simla Hill States. At the close of the year a fair amount of germination had taken place, but it is more than doubtful if sowings on a large scale will meet with success. In Changa Manga it has been found that "Eucalyptus tereticornis" and "E. rostrata" do better than any other species tried. Spanish Chestnut has done well in Kulu, where spare plants were distributed amongst the villagers. The sowings of "Maclura Aurantiara" in Lahore Division have proved a success after the seed has lain dormant for over a year. "Cryptostegia grandiflora" in Kangra and the Pabbi is kept back by excess both of heat and cold, but appears to maintain itself in spite of this.

Outturn of Forest produce.

241. The outturn of forest produce was greater under nearly every head than in the previous year, the outturn of timber showing an increase of about 6¼ lbs. of cubic feet and of firewood an increase of nearly 11 million cubic feet.

Financial results.

242. The revenue and expenditure were Rs. 14,66,593 and Rs. 9,02,454, respectively, as compared with Rs. 13,57,527 and Rs. 9,25,748 in the previous year. These figures indicate an increase of receipts and a decrease of expenditure over last year's by Rs. 1,09,066 and Rs. 23,330, respectively, and is very gratifying.

ARBORICULTURE.

243. The triennial report was submitted last year.

31.—Mines and Quarries.

Indian Mines Act.

244. The number of mines worked during 1914 was 22. They consisted of 4 Government salt mines, 9 coal mines (six in Jhelum, one in Mianwali, and two in Shahpur District); 8 slate mines (four each in Gurgaon and Kangra); and one limestone quarry at Hoshiarpur. No new prospecting licenses for coal were given. From the four Government salt mines in the Salt Range, 135,517 tons of salt were extracted compared with 1,38,541 tons in 1913. As regards coal, the outturn rose from 51,040 tons during 1913 to 53,774 tons during 1914, showing an increase of 2,734 tons: the output in Shahpur was 6,879 tons, in Mianwali 1,028 tons and in Jhelum 45,866 tons. The total value of the coal extracted was Rs. 2,80,419 or Rs. 21,614 more than in 1913. From the 8 slate mines 9,169 tons of slate were taken, worth Rs. 1,16,445.

Other minerals.

245. The minerals which do not come under the Indian Mines Act are (*a*) Gold by washing, (*b*) Petroleum, (*c*) Alum shale, (*d*) Block kankar, (*e*) Limestone, (*f*) Gypsum, (*g*) Antimony ore, (*h*) Building and sandstone. The outturn and value of the minerals recovered during 1914 have been as follows:—

District.	Mineral recovered.	Value.
		Rs. A. P.
Ambala, Jhelum, Mianwali and Attock ...	Gold, 249·98 oz.	14,904 15 3
Mianwali	Petroleum, 1,200 gallons	192 0 0
Ditto	Alum shale, 4,234 tons	4,102 2 0
Ambala	Block kankar, 1,738 tons	3,407 4 0
Jhelum	Limestone, 29,030 tons	1,975 10 8
Ditto	Gypsum, 2,620 tons	178 5 2
Ditto	Antimony ore, 9·17 lbs.	54 0 0
Simla	Building stone, 3,762 tons	879 0 0
Jhelum	Sandstone, 60,818 tons	95,571 0 0

246. The Attock Oil Company hold prospecting licenses for mineral oil over 55½ square miles in the Attock District. Sanction was also given during August to the grant to the Burma Oil Company of four prospecting licenses over an area of 16·95 square miles in the same district. The former Company has applied for a mining lease over 4 square miles and is boring for petroleum. A good supply of oil has been struck

The materials for a million gallon capacity storage tank are on the way. Other applications for prospecting licenses for mineral oil in the Rawalpindi Division are also being received.

32.—Manufactures.

247. The number of factories subject to inspection under the Act has decreased from 224 to 201, of which 197 actually worked for some periods of the year. Of the 197 factories working, 133 factories were inspected once, 41 factories twice, 10 factories thrice and three factories more than three times. On the whole the supply of drinking water in factories is both good and adequate : sanitary arrangements are fairly satisfactory and cleanliness in ginning factories shows improvements. The general lighting and ventilation arrangements however are not very satisfactory though better than formerly. A noteworthy case occurred in the Monotype Press at Simla : it was found that many of the employees were suffering from lead poisoning, which was easily traceable to the fumes rising from the pots containing the molten type metal in the monotype. Additional ventilation has now been provided, hoods have been fitted over the pots, and the harmful fumes are drawn away through ducts to the outside air by means of an exhaust fan, as is the case with all monotype machines in England.

248. The average daily number of employees in all the factories in question was 31,243 compared with a total number of 31,709 last year : the figures for adult females and child workers being 3,749 and 1,132 compared with 3,864 and 792 in the previous year. The wages of skilled employees in ginning factories usually vary with the output, a considerable bonus being in many cases added to the monthly wage : nor is the classification of the operatives clear-cut ; for instance, a man going by the name of ' fitter ' receives anything from 18 to 55 rupees per month. The wages of unskilled labourers vary according to the demand in the particular district and also with the working hours. A coolie generally gets from Re. 0-6-6 to Re. 0-8-6 per day, while in ginning factories the rate of wages is Re. 0-4-6 to Re. 0-5-6 in the case of men and Re. 0-3-6 to Re. 0-5-0 in the case of women : children get from two to two-and-a-half annas a day. The employees in factories are generally healthy. There were in all 227 accidents (11 fatal as compared with 231 last year. Many of the accidents were due to inadequate fencing. The employment of women and children for excessive hours is less common than it was, owing to the success which attended the prosecutions instituted by the Inspector of Factories and to the warning and advice which he has given to the factory managers : of the 13 prosecutions which were undertaken none were unsuccessful.

33.—Trade.

Internal Rail and River borne Trade.

General.

249. The shadow of the great war fell heavily on the commercial activities of the Province. The total value of exports of merchandise from the Punjab in 1914-15 fell short of the imports by more than 3½ crores. This is a reversion to the state of affairs in 1911-12 when the value figures for exports were almost identical with those of the year under review. The decline in the exports of cotton, rapeseed and inferior grains accounts for this shortage.

Imports.

250. Under net imports the chief increases are of jowar and bajra, Rs. 91 lakhs ; of husked rice, Rs. 67 lakhs (due to dearness of wheat) ; cotton seed, Rs. 23 lakhs (owing to scarcity of fodder in the south-east dry area) ; unrefined sugar, Rs. 11 lakhs ; gunny bags, Rs. 7 lakhs ; and raw wool Rs. 5 lakhs. Carriages and trucks, steel rails, etc., also show an expansion of Rs. 42 lakhs, which indicates the Railway extension proceeding in the province. The main decreases are under foreign piece-goods, Rs. 159 lakhs, and Indian piece-goods, Rs. 18 lakhs (attributable to a glut in the market and short demand) : refined sugar, Rs. 101

PRODUCTION AND DISTRIBUTION.

lakhs (accounted for by stoppage of Continental sugar export and diversion of the Java crop to Europe) ; and metals, Rs. 53 lakhs (owing to decreased requirements for Imperial Delhi).

Exports.

251. The influence of the war is even more manifest in exports. The most important increase in net exports is under wheat which advanced by Rs. 184 lakhs. Wheat flour also increased by Rs. 9 lakhs. Owing to high prices the total value of exports of grain and pulses is Rs. 30 lakhs higher. Enhanced prices for leather give an increase in total value of Rs. 6 lakhs. Another interesting (and perhaps not unexpected) rise was one of Rs. 4½ lakhs in saltpetre, the bulk of which comes from the Cis-Sutlej block. With the foreign demand cut off, exports of raw cotton declined by Rs. 516 lakhs and of rape and mustard seed by Rs. 286 lakhs. Other grains fell off by Rs. 88 lakhs. There was no demand by the United Provinces and barley was not exported. Similarly hides and raw Indian silk decreased by Rs. 30 lakhs and Rs. 7 lakhs, respectively.

Treasure.

252. The net imports of gold coin and bullion decreased by Rs. 164½ lakhs. On the other hand imports of silver coin rose by no less than Rs. 52½ lakhs. This difference is explained by the free encashment of notes at district treasuries and the abnormal disbursements of the Post Office on account of withdrawn savings bank deposits which occurred in the excitement of the early days of the war. Silver bullion increased by Rs. 22½ lakhs. Imports during the previous financial year had been low and exports very high.

TRANS-FRONTIER TRADE.

General.

253. In 1914-15 the balance of trade set in favour of the Punjab by over Rs. 3¾ lakhs. Compared with the year 1913-14 imports declined in weight by nearly 9½ thousand maunds and in value by over Rs. 3½ lakhs. Exports also dropped by over 9½ thousand maunds in weight and Rs. 2½ lakhs in value. The trade with Central Asia registered at Leh is chiefly responsible for these differences.

Afghanistan.

254. A decline in imports of 1,960 maunds, valued at Rs. 43,000, and in exports of over 4,400 maunds, valued at Rs. 19,500, was recorded as compared with last year's figures. In imports, the heaviest fall was in fruit and vegetables, ascribed to an unfavourable season in Afghanistan. The import of wool practically ceased owing to the prohibition of export from his country by His Majesty the Amir noted last year. A decrease in export of foreign piece-goods was more than counterbalanced by an increase in export of Indian cotton piece and manufactured leather goods. Owing to the high price of food-grains in India the export of rice fell off by over 4,500 maunds, valued at Rs. 23,000. This single item covers the whole retrogression in the export trade. The decline in the figures for green tea (which however rose in value) is attributed to the stocks in Afghanistan being sufficient.

Central Asia.

255. The trade of Central Asia is the most important. The total exports to Central Asia exceeded the total imports from that country by Rs. 6 lakhs. Compared with last year the maundage of imports only fell off slightly, but the value decreased by over two lakhs. This is almost accounted for by the decreased value of the charas imported. In weight it was short of the previous year's imports by less than 500 maunds : in value it declined by over Rs. 2 lakhs, owing to the inferiority of its quality and accumulation of stocks in the Punjab. The raw silk imports, while actually in slight excess of those of the previous year, were valued at Rs. 35,000 less, thanks to the poor quality of the Khotan crop. The increases in exports are under intoxicating drugs, unmanufactured leather and provisions, while there are considerable decreases under foreign piece-goods (cotton), silk, woollen and other manufactured goods, and numerous other articles. The explanation given by the Assistant Resident of Leh is that trade passing through Ladakh waxes and wanes in alternate years, because traders make the double journey from the Punjab to Chinese Turkistan and back every second year. The principal men, either by design or coincidence, are

generally to be found moving in the same direction in the same year. In the 12 months under review no well-known Hoshiarpur trader was on the road.

256. The weight of imports was little more than half that of last year, although the value was only 25 per cent. less. Borax, which had come to be regarded as a moribund trade, showed a further advance on last year's figures. Raw wool shews a huge fall of nearly Rs. 1 lakh, which is ascribed not very satisfactorily to ordinary trade fluctuations. Salt imports continue to decline as the cheaper and better class Indian salt gains in favour. Chinese Tibet.

257. Exports were a bare one-third of those of 1913-14, but actually rose in value by 18 per cent. This is to be accounted for by diminished export of grains and increased export of more expensive manufactured articles such as brass and copper, cotton and woollen goods, etc. The expansion in tea exports is satisfactory.

Joint Stock Companies.

258. The number of registered companies with share capital working on 31st March 1915 shows a large decrease as compared with the previous year, the actual figures being 99 as against 146. Only 6 new companies were registered during the period under report, while no less than 52 came to grief. In addition one company was lost by transfer to the Bombay Presidency. Even these figures however do not represent the real position for there is a further batch of 15 companies which are at a standstill, but which had not before the close of the financial year sent official intimation of their liquidation.

259. Of the new companies registered during the year, two were banks, two trading companies, while the remaining two were connected with a mill and a brewery, respectively. As their names—the new Peoples Bank and the New Doaba Bank—suggest, the two banks were floated mainly with the object of assisting the liquidation of two concerns, the Peoples Bank and the Doaba Bank, which had been obliged to close their doors. The New Doaba Bank, however, appears to have been still-born, while at the end of March, the New Peoples Bank had not commenced business.

260. Of the 52 companies, which are shown as having succumbed during the year, 14 really belong to the previous year, but had either failed to send intimation or had omitted to follow prescribed procedure in respect of liquidation. The details of the 52 companies are as follows :—

Banking Companies	19
Insurance Company	1
Trading Companies	22
Mills and Presses	5
Mining and Quarrying Company	1
Land and Building Companies	2
Sugar Manufacturing Companies	2
	52

261. In all probability many of these companies would have come into the hands of liquidators even in normal times, but their fall has been accelerated partly owing to the general financial situation in the province aggravated by the war and partly owing to the new Companies Act which, *inter alia*, put a stop to the farcical and highly pernicious system of reciprocal audit. The failure of so many companies is no doubt a serious blow to the industrial development of the Province and for some time to come the course and extent of investments may be affected, but in the long run the present losses may prove to have been most beneficial. The removal of a number of rubbishy and dishonest concerns will clear the way for the growth of sounder companies under more able management and hedged round by the more stringent provisions of the New Act.

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262. In the face of the facts mentioned above it is not surprising to find a large decrease in the nominal, subscribed and paid-up capital. The figures are as follows :—

	Rs.
Authorised capital	3,15,03,000
Subscribed capital	54,31,930
Paid-up capital	12,59,365

These large deficits make their appearance in spite of the fact that during the year 93 lakhs of authorised, 29 lakhs of subscribed and 17 lakhs of paid-up capital were added. The proportion of paid-up to authorised capital is now rather over one-third.

263. A special judicial officer, with head-quarters at Lahore, has now been placed in charge of the Provincial liquidations. As a result the work receives full and careful attention and delays are reduced to a minimum. Various criminal acts on the part of fraudulent directors have been brought to light. As a result of a successful prosecution the Managing Director of the Hindustan Bank is now serving a four years' sentence, confirmed by the Chief Court. Action of this kind will lead to a more healthy state of things in the directorate ; in too many cases at present it consists of one or two clever rascals supported by a few incompetent figure heads.

264. It may safely be affirmed that the new Act has had a most wholesome effect. As regards audit, the full benefit has not yet been obtained because it was thought inexpedient to interfere with appointments made for the year under report prior to the 1st April 1914. But even so a great improvement in the quality of the work is manifest and share-holders have now a fair opportunity of ascertaining the true position of affairs. Though it has not been found necessary to report any company under section 137 (5) of the Act, several calls for further information have been made under section 137 (1) and the fact that such a provision exists constitutes a considerable safeguard from the public point of view.

34.—Buildings and Roads.

Total expenditure.

265. The total outlay on Public Works in the Buildings and Roads Branch amounted to nearly 83 lakhs. Though this is less than in 1913-14 it is higher than in any previous year.

Imperial Civil Works.

266. The outlay was nearly 3 lakhs of which Rs. 1,93,000 was on Original Works, Rs. 56,000 on repairs and the remainder on establishment and Tools and Plant. The chief works executed were at Simla where new quarters for peons at the General Post Office, extensions of the Government Monotype Press, and horse shelters at Viceregal Lodge have been constructed.

Imperial Military Works.

267. Expenditure Rs. 66,000, of which Rs. 24,000 was on Original Works chiefly for water-supply to the Cantonment at Dharmsala and stallion stables at Kasur and Rs. 31,000 on repairs.

Provincial Civil Works.

268. The outlay on Original Works was 42 lakhs and on repairs 17½ lakhs—total 59½ lakhs. A large portion of the building construction in the Province has been carried out at Lahore where the principal works executed or in hand are :—

The King Edward Memorial which consists of extensions to the Mayo Hospital and construction of new buildings for the Medical College Research Institute, Nurses' Quarters, Indian Family and Private Wards, Quarters for European and Indian Staff and for servants. Sanction of the Secretary of State to the project for 36 lakhs was only received in November, so not more than Rs. 3,62,000 could be spent during the year and this was chiefly on the extensions to the Mayo Hospital, to commence which permission had previously been obtained in anticipation of sanction to the entire scheme. Of the total estimated cost of 36 lakhs, 17 lakhs has been contributed by private subscriptions.

A commencement was made by collection of material for much needed alterations and extensions to the Government House, Lahore, which was originally the tomb of Mohammad Kasim Khan who died in Lahore in the reign of the Emperor Shah Jahan and it was occupied as a residence by one of the Sikh Sirdars in the time of Ranjit Singh and since the mutiny of 1857 has been utilised as the residence of the Chief Commissioner and subsequently of the Lieutenant-Governor.

The new Veterinary College at Lahore which had been commenced last year was practically completed at a cost of 6½ lakhs of which 3¼ were spent during the year.

A new building for the Government Press at Lahore has also been finished at cost of 2¾ lakhs, of which 1 lakh was spent during the year.

Owing to the difficulty experienced by officers in finding suitable houses at Lahore a scheme was prepared for the construction of official residences. The project requires the sanction of the Secretary of State, but as a preliminary measure permission was accorded to thepurchase of a site and 5¼ lakhs has heen expended on this. The site selected is the old golf links between the main road to Lahore Cantonment and the Race Course.

The road bridge over the Ravi at Lahore, a short distance below the North-Western Railway bridge, was com pleted at a total cost of 6 lakhs, of which Rs. 1,16,000 were spent in the year.

Progress on the Grain Elevator at Lyallpur was much delayed owing to a change in the proposals for working it which prevented the indent for machinery being prepared and submitted to the Director-General of Stores in time for him to comply with it.

The foundations have been completed and of the super structure about ¾ was finished at the end of the year.

Communications.

269. Many improvements have been made in the communications of the Province. Besides the Ravi bridge above mentioned, bridges over the Beas and Sutlej have been opened for traffic and the old Railway bridge over the Jumna near Saharanpur is being converted for road traffic ; the work is being carried out by the United Provinces Government and expenditure shared between the two Provinces. Plans and estimates for connecting this bridge with Jagadhri by a new metalled road are in hand.

270. The road from Rawalpindi to Murree has been much improved by widening the metalled surface in 17 miles from 12 feet to 16 feet and much useful work has been done on the Hindustan-Tibet Road in the construction of several short diversions and realignments which improve the gradients and thereby facilitate traffic.

Jails.

271. A new subsidiary jail at Sargodha was completed at cost of Rs. 45,000 and sub-jails at Amritsar and Lower Dharmsala.

Police.

272. Police and Education buildings again as in last year account for a large item of the Provincial expenditure.

273. Improved quarters for Police officials, chiefly Inspectors and Sub-Inspectors, have been built at most of the district head-quarters and elsewhere and a large Kotwali--a handsome building, designed by Sardar Bahadur Bhai Ram Singh, M. V. O.,—was constructed on a fine site in the Landa Bazar at Lahore. The total expenditure on Police buildings during the year was 6½ lakhs.

Educational.

274. High Schools with hostels attached at Dera Ghazi Khan and Dharmsala and a Normal School at Lyallpur have been completed and High Schools with Boarding Houses were under construction at Lyallpur, Sialkot, Gujranwala, Gurdaspur and Hoshiarpur.

275. A large new Biological Laboratory for Government College, Lahore, was completed and work commenced on a Physics Laboratory.

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A Preparatory School for Boys for the Aitchison College has been erected on a site opposite the Queen Mary's College at Lahore.

The total expenditure on Educational buildings was 9 lakhs.

Medical.

276. A Civil Hospital at Dera Ghazi Khan has been completed and good progress made on additions to the Walker Hospital, Simla, on which Rs. 1,11,000 were spent.

Additions have been made to the Lunatic Asylum and to the Vaccine Institute, Lahore, and a Hospital Dispensary at Lower Dharmsala completed and occupied.

Sanitary Works.

277. The most important sanitary work carried out has been the Sialkot water-supply—estimated cost 4½ lakhs—which was started in November 1913 and nearly completed at the end of March 1915.

Owing to a fall in the water level the pumps of the Ambala water-supply at Handisra were lowered and have been working satisfactorily since.

Extension to the water supply schemes at Toba Tek Singh and Chak Jumra have been completed and drainage schemes at Gurdaspur, Chiniot and Chuhar Kana.

Contribution Works.

278. A hospital at Dera Ghazi Khan was completed at cost of Rs. 32,000 and a dispensary at Tandlianwala and the construction of a hospital at Hissar was in hand. Extensions to the Punjab University Library at Lahore were started.

279. The influence of the war has been felt in this as in other departments and many works have been retarded and their cost enhanced owing to the difficulty and expense of obtaining material of European manufacture.

All Royal Engineer Officers, 5 in number, below the rank of Lieutenant-Colonel were recalled to military duty and 3 Civil Engineers out of many volunteers were selected and are doing duty with Army.

34 A.—Railways and Tramways.

280. On the North-Western Railway the number of miles of open line is now 5,329, and 158 miles are under construction or sanctioned for construction. The total capital outlay up to 1914-15 amounts to £60,269,000. The gross earnings were Rs. 9,22,24,000 and the working expense Rs. 5,66,13,000. Net earnings amounted to Rs. 3,56,11,000. The percentage of net earnings on total capital outlay amounted to 3·78.

281. Considerable progress was made with the scheme for completing the net work of railways designed to serve the rich tract of country between the upper waters of the Beas and Sutlej, known as the Jullundur Doab. Work began in November 1911, and the line was opened in sections for passenger traffic from 1st January 1913 to 15th June 1914, when the Sutlej Bridge of 20 spans of 100 feet was completed. There has been no goods traffic to speak of since the whole line was open, but the passenger traffic alone has given handsome returns and shows that, when in normal years the considerable surplus crops are exported to Karachi, the line will fully justify the expenditure on its construction.

282. The yards at Lahore and Amritsar, two of the most important stations on the line, were extensively remodelled. Twenty-five new stations were built, though several of these have been necessitated by military considerations rather than by the requirements of ordinary public traffic. The new Carriage and Wagon Shops at Lahore were recently completed, and the new Locomotive Shops are fast approaching completion.

283. Owing to the great increase in the mileage and volume of traffic it was found that the Traffic Department could no longer be efficiently supervised by one Traffic Manager. Proposals were accordingly submitted to the

Secretary of State for bringing into operation separate Commercial and Transportation Departments as in the case of European and American Railways; the one to deal with the commercial side of traffic working, including rates and claims, and the other to deal with transportation and passenger traffic. It is hoped that these arrangements will enable the Transportation Department to exercise that close check which is so essential to efficient working, and the Commercial Department to specialise in its branch of the work, and thus permit the latter to give the many budding industries in the province the special attention which is necessary for their development. The outbreak of the war and the consequent surrender of staff for military duty has temporarily interfered with the completion of the change, which will be carried out as opportunity offers.

35.—Irrigation.

284. The direct receipts and expenditure of the Irrigation Department during the year were Rs. 2,54,30,527 and Rs. 1,77,54,953, respectively, as against Rs. 2,44,78,716 and Rs. 22,14,14,460, the average of the previous triennium. The expenditure as divided between Capital and Working Expenses amounting to Rs. 76,16,453 and Rs. 1,01,38,500, respectively, the former included Rs. 68,23,402 expended on the construction of the triple canals during the year. In addition to the direct receipts the indirect revenue credited to the canals on account of enhanced land revenne, etc., amounted to Rs. 111·53 lakhs as compared with Rs. 88·95 lakhs, the average of the previous triennium. General.

285. The total area irrigated by works of all kinds and the area matured amounted to 8,963,041 and 8,615,506 acres, respectively, showing an increase of 636,666 and 608,441 acres, respectively, over the figures of 1913-14 and of 547,414 and 721,726 acres over those of the previous triennium. The area was, in fact, a record one, due to the unusually favourable conditions that obtained during the year for agricultural operations.

286. The financial results of the operations of canals classed as Productive Major Works and the area irrigated by each is shown in the following statement:—

1	2	3	4	5	6	
Name of Canal.	Area irrigated.	Gross income.	Working expenses.	Net income.	Percentage of profit on the capital outlay.	
					Excluding interest charges.	Including interest charges.
	Acres.	Rs.	Rs.	Rs.		
Western Jumna Canal ...	875,841	32,24,740	13,78,175	18,46,565	10·44	7·11
Sirhind Canal ...	1,282,781	39,12,938	11,98,243	27,14,695	10·65	7·32
Upper Bari Doab Canal ...	1,194,989	43,99,649	14,61,553	29,38,096	13·65	10·27
Lower Chenab Canal ...	2,312,213	1,55,86,354	23,32,569	1,32,53,785	41·81	38·42
Lower Jhelum Canal ...	821,488	43,64,474	8,87,219	34,77,255	21·8	18·38
Upper Sutlej Canal ...	439,679	6,11,930	3,48,373	2,63,557	14·59	11·29
Sidhnai Canals ...	331,659	6,72,544	1,58,230	5,14,314	38·61	35·13
Indus Canals ...	228,892	4,25,502	4,14,151	11,351	0·40	—3·0
Upper Chenab Canal ...	211,882	8,25,826	7,75,292	50,534	0·15	—3·17
Lower Bari Doab Canal ...	189,204	5,38,488	3,70,644	1,66,844	0·83	—2·47
Total ...	7,883,628	3,45,61,445	93,24,449	2,52,36,996	14·70	11·35

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287. On the ten Major Canals in operation a capital outlay, direct and indirect, of Rs. 39,26,106 was expended, bringing the total cost of these canals to Rs. 17,17,13,716 upon which a net revenue of Rs. 2,52,37,996 was obtained, giving a profit of 14·70 per cent. Excluding, however, the Upper Chenab and the Lower Bari Doab Canals which, though opened in 1912 and 1913, respectively, are not working properly yet, the percentage of the profit comes to 21·15—which is satisfactory. The net profit after paying interest charges of Rs. 57,55,299 amounted to Rs. 1,94,82,697 or 11·35 per cent. on the total capital outlay.

288. On all the Imperial Minor Canals which are not classed as productive, including the two canals for which capital accounts are kept, the net profit earned amounted to Rs. 9,47,214 as against Rs. 9,07,411 in 1913-14.

On the two Provincial Canals system the net profit was Rs. 26,215.

On the Canals of the Triple Project Rs. 9,38,25,952 were expended on capital account in direct and indirect charges up to the end of the year under report.

The gross Imperial Capital now invested in the Punjab Major Canals is Rs. 22,75,33,724 or over £ 15 millions sterling. The details for each canal are given in subsequent sections.

MAJOR WORKS—CANALS IN OPERATION.

Western Jumna Canal.

289. The area irrigated was the highest on record and the gross revenue collected was Rs. 2,09,937 more than the average for the triennium ending 1913-14. Working expenses, however, were Rs. 1,38,948 more than the average of the previous triennium, due to heavy expenditure on silting tanks and improvements to banks of channels, and on clearance of drainages.

The investigations made in connection with the proposals for a Dam 200 feet high in the Jumna River at Koch, 8 miles above Tajewala, are now under the consideration of the Local Government.

A special Drainage Division was formed in March 1914 to investigate the very complicated problems connected with closed drainages in the Karnal District. This vexed question has defied solution for the last 50 years and it seems likely that much money will have to be spent to obtain the desired improvements.

Proposals for remodelling the Head Works at Tajewala, the subsidiary head works at Dadupur and the whole of the Main Line from Tajewala to Indri were under consideration during the year and have made considerable progress.

Sirhind Canal.

290. The kharif was exceptionally favourable, being 11·89 per cent. in excess of the average irrigation of the previous triennium. The rabi, on the other hand, showed a decrease of 26·15 per cent., while the deficiency in the total of both crops taken together amounted to 13·4 per cent. The decrease is not surprising as the year 1911-12 was a record one, while 1912-13 and 1913-14 were years very much above the average.

Compared with 1913-14 there was a decrease of 75,147 acres in the total area irrigated, due to exceptionally late monsoon rains which enabled rabi crops to be sown without canal water, and as this was followed by favourable winter and spring rains canal water was not required to mature these "barani" areas.

Upper Bari Doab Canal.

291. The area of 11,94,989 acres irrigated exceeded the average of the two previous triennia, while the rabi was a record one.

From an agricultural point of view the year was a good one, the supply was plentiful, and the climatic conditions generally good. In the new Fourth Division further improvements were made in remodelling distributaries and Minor channels, which have added to the irrigation efficiency.

292. Compared with the figures of the year 1913-14 the area irrigated shows an increase of 66,615 acres.

Lower Chenab Canal.

The revenue shows an excess of Rs. 1,03,334 over 1913-14 due to increase in irrigation and to the greater amount realized from the sale of Government waste lands. There was a slight decrease in the percentage of profit on the capital outlay due to increased expenditure under capital.

The accumulated net profits have increased from Rs. 9,03,06,634 to Rs. 10,24,86,450 as against a capital outlay of Rs. 3,17,00,058.

The conditions of the year, both for the kharif and rabi crops, were more than usually favourable for agricultural operations and full advantage was taken of these conditions as is evident from the results obtained during the year. The year under review was free from any serious breaches in the canal or distributaries and from calamities except in the Lyallpur Division, where a hailstorm in November did a great deal of damage to the Toria crop in parts of the district, and hailstorms and thunderstorms in February and March did some damage to the wheat crop.

Lower Jhelum Canal.

293. The season was, on the whole, favourable to agriculture and irrigation. The supply in the canal was sufficient and rotational closure of branches were not found to be necessary. The canal was closed at head for 31 days during kharif and for 18 days during rabi, owing to slackness of demand for water and for special repairs to works.

The areas irrigated and assessed (821,488 and 799,801 acres, respectively) were practically identical with those of the preceding year (which were 823,532 and 803,219 acres, respectively; these being the highest on record). Out of the total areas of 821,488 acres irrigated 403,012 acres were in proprietary villages and 418,476 in new villages (colony).

The net revenue represented a return of 21·8 on the capital outlay one per cent. higher than that of the preceding year which itself surpassed all previous records.

Upper Sutlej Inundation Canal.

294. The net area of 424,065 acres assessed was a record one, mainly due to a very favourable river, which remained high for a considerable time, especially during September and in the beginning of October, a very opportune time for maturing kharif crops and sowing rabi crops.

Sidhnai Canals.

295. The results of the year's operations were entirely satisfactory, the total areas irrigated and assessed (331,659 and 304,702 acres, respectively) being the highest on record. The heavy rainfall during kharif benefited the crops considerably, and river supply was practically favourable throughout the year. The outturn of wheat was below average, but other crops were good. Cattle were in good condition, fodder being plentiful.

Indus Inundation Canals.

296. The decrease in the area irrigated in both kharif and rabi as compared with the two previous triennia is due to the paucity of supply in some of the canals, *viz.*, the Manka Kasturi and Dhingana. The supply of water was short in the middle of the season owing to a low river, and river erosion, and the consequent silting up of heads increased the difficulties with which these canals had to contend.

The net revenue was Rs. 1,13,065 less than in the previous year due to the following causes :—

(*a*) A smaller area being assessed to water rates owing to very large remissions being granted during kharif 1914 due to short supply of water consequent upon the early closing of most of the canals.

(*b*) A greater amount being spent under working expenses during the year.

(*c*) A large amount remaining unrealized at the close of the year, *viz.*, Rs. 31,659.

PRODUCTION AND DISTRIBUTION.

Triple Canals.

297. The construction work on the Triple Project is now drawing to a close. The Upper Chenab Canal was formally opened in 1912, but further construction was necessary and it was not until the year under report that the tail reach of the canal was finally completed and water passed into the River Ravi at Balloki. Previous to this surplus water was escaped into the Deg Nallah as a temporary arrangement.

The Lower Bari Doab Canal, another link of the Triple Project, was formally opened in 1913, but it is, like the Upper Chenab Canal, dependent for most of its supply on the Upper Jhelum Canal, and both have to await the completion of the Upper Jhelum Canal for a sufficient supply of water. Nevertheless, the results so far obtained are satisfactory. The area irrigated on these two canals was 211,882 and 189,204 acres which compare favourably with the Project figures of 350,000 and 167,844 acres, respectively.

Satisfactory progress was made during the year on the Upper Jhelum Canal. The breach in the river bund, which occurred in April 1914, resulted in the flooding of the foundation of the regulator and deep cutting beyond. The work was, however, quickly restarted and the *bund* reconstructed and strengthened and pushed on, night and day, to completion, against a rising river without any further serious interruptions, with the result that not only the Head Regulator but also the Mangla Cut, which has proved a far more difficult piece of work than was at first anticipated, have sufficiently advanced to allow of water being passed down to the Chenab River and so provide for supplies in the Lower Bari Doab Canal during rabi 1915-16.

298. The following table exhibits the financial results of the operations of Imperial and Provincial Minor Canals and the area irrigated by each :—

1	2	3	4	5
Name of canal.	Area irrigated.	Gross income.	Working expenses.	Net income.
	Acres.	Rs.	Rs.	Rs.
Shahpur Canal (Imperial)	43,697	1,16,689	50,207	66,482
Ghaggar Canals	51,951	...	...	—23,134
Lower Sutlej Canals	374,059	6,31,012	2,74,494	3,56,518
Chenab Indus Canals	219,398	4,85,893	1,87,476	2,98,417
Muzaffargarh Canal	378,544	6,39,013	3,90,082	2,48,931
Shahpur Canals (Provincial)	31,050	58,150	42,083	16,067
Jherku Canals	798	12,528	2,380	10,148

Shahpur (Imperial) Inundation Canals.

299. The river supply failed to enter the Eastern Station Canal early in August, owing to silt deposits in the canal, and low water levels in the river. Flow was restored subsequently when the river again rose in freshets, but ceased again on the 22nd August 1914.

An abnormally late flood of considerable magnitude occurred on the 31st October 1914, causing the canals to flow once more for four days, until 3rd November. This late flood was very beneficial to the rabi crops.

The canals all ceased to flow for the rest of the year on the 3rd November 1914.

The area successfully matured was 39,375 acres as against 33,901 acres, the average of the preceding triennium. The increase was mainly due to the abnormally late flood of the first few days of November 1914.

Ghaggar Canal.

300. Including the " paleve " area (19,495 acres) which was watered but not sown, the total area irrigated (51,951 acres) was a record one, due to the late rain which kept the reservoir full to a later date than usual.

As these canals receive no credit for any fluctuating revenue up to Rs. 37,000 their operation always shows an apparent loss.

PRODUCTION AND DISTRIBUTION.

IMPERIAL MINOR WORKS WITH REVENUE ACCOUNTS ONLY.

Lower Sutlej Inundation Canals.

301. The canals were opened earlier than usual owing to an early rise in the River Sutlej on which they are dependent.

Agricultural conditions of the year under review were distinctly good. Crops matured well and kharaba remissions were small. The total areas irrigated and assessed (374,059 and 347,483 acres) were the highest on record and the general result of the season's working may be said to be eminently satisfactory.

Some erosion took place at the heads of the Mahamedwah, Mailsi and Hajiwah Canals during July and August, but not to such an extent as to vitiate their working.

Chenab Inundation Canals.

302. The channel which requires water earliest is the Sikandrabad Canal as it matures more indigo than any other canal and also irrigates a larger acreage of garden land. It was opened in April as usual and worked very satisfactorily. The Bilochanwah Canal was opened rather late owing to the low river; it seldom flows for long and is generally opened late. Breaches in the Wali Muhammad and the silting up of its main head during August 1914 caused some reduction in supply; but, on the whole, the irrigation was above the average.

Agricultural conditions of the year were good. Crops matured well and kharaba remissions were comparatively small. The total areas irrigated and assessed (219,398 and 194,218 acres, respectively) were the largest on record.

Muzaffargarh Canals.

303. The area of 378,644 acres irrigated was the second largest on record and the results of the year's operations were, on the whole, satisfactory. The year was one of heavy rainfall and large river supplies. Though escapes were worked in August to their full capacity and water was run over the Bet land freely, the canals brought down far more water than was needed and swamping occurred in large areas on the tail channels of the Maggi and Taliri Canals, which retarded the sowings of the rabi crop.

PROVINCIAL CANALS.

Shahpur Provincial Inundation Canals.

304. The river supply was, on the whole, favourable. No supply difficulty was experienced on these canals.

On the whole the working of these canals was fairly satisfactory; but the credit lies entirely with the Raniwah Canal, for on the Corbynwah Canal (which is a river creek rather than an artificial canal) the area irrigated was less than might reasonably be expected, considering the favourable condition of the river.

Ravi Inundation Canals.

305. These canals consist of (1) the Deg, (2) the Nikki, (3) the Sukhrawa, and (4) the Jherku Canals in the Montgomery District, and were working under the Punjab Minor Canals Act (Act III of 1905). In 1914, however, the first three canals were excluded from the operations of the said Act as the area irrigated by the Deg Canal was brought under the command of the Upper Chenab Canal, and that by the Nikki and Sukhrawa Canals under the command of the Lower Bari Doab Canal, both working under Northern Canal and Drainage Act (Act VIII of 1873).

Thus, there only remained the Jherku Canal which was doing irrigation as an Inundation Canal under this system during the year.

The area irrigated amounted to 798 acres (35 acres in kharif and 763 acres in rabi).

HAVELI WEIR PROJECT.

306. Preliminary investigation was started with a view to ascertaining what measures were possible for the improvements of the Chenab series of Inundation Canals in the Multan and Muzaffargarh Districts. These investigations showed that such a scheme was not only feasible but sufficiently alluring to justify a more detailed investigation. With this object in view a new Division, called the Haveli Project Survey Division, was formed on the 1st October 1914. Detailed surveys of the tracts were

PRODUCTION AND DISTRIBUTION.

carried out with the result that a Project was formulated for the construction of a weir across the River Chenab immediately below its confluence with the Jhelum River combined with canals taking off above it on both the eastern and western banks. This Project, which has since been drawn up and submitted to the Government of India, will, if sanctioned, not only improve the semi-perennial Sidhnai Series of canals and the Inundation Canals of the Multan District, but will also bring under irrigation large areas in the Jhang District which are now uncommanded.

Neila Dam, Sirhind Canal.

307. The original project for a Dam and Reservoir on the Sutlej River at Neila Gorge, which some years ago was rejected as being financially unsound, has again been taken up with a view to enquiring whether the original revenue forecast was not pitched too low, and if it was feasible to increase the rates to be charged for the water supplied, in view of the great benefits to be obtained in the arid famine swept tracts of Sirsa and Dabwali to which the extension of irrigation would be carried, and also whether the initial cost of the Dam could not be reduced, by disposing of the river supplies during construction through tunnels in the sides of the gorge. These points are again receiving the careful consideration of the local officers.

Proposed Maler Kotla Distributary from the Sirhind Canal.

308. Plans and estimates for a distributary to provide kharif irrigation to a part of Maler Kotla State from the Bhatinda Branch of the Sirhind Canal have been under preparation for some time; surveys were carried out during the cold weather, and the details of the scheme are now under consideration.

Sutlej Valley Project.

309. The project estimates in connection with the utilization of the surplus water of the Sutlej river proposed last year is pending the orders of the Government of India on certain points referred to them for decision.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :-

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1914.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1914-15.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1914-15.

Stamps.—Note on the Stamp Statements of the Punjab for the year 1914-15.

Income-Tax.—Report on the Income-Tax Administration of the Punjab during the year 1914-15.

Forests.—Progress Report of Forest Administration in the Punjab for 1914-15.

Provincial Revenues.—Budget for 1915-16 and Finance Statement, published in the *Punjab Gazette.*

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1914-15.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1914-15.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part III—Commercial Services.

Part IV (*b*)—Finance and Revenue.

Part VIII—Local Funds.

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1914-15.

36.—Gross Revenue and Expenditure.

310. The following table shows the receipts under the various heads of revenue in the year under report— Gross revenue.

Major heads.	Imperial.	Provincial.	Total.	+ on figures − for 1913-14.
	Rs. 1,000.	Rs. 1,000.	Rs. 1,000.	Rs. 1,000.
Land Revenue	1,42,29	1,42,28	2,84,57	+ 15,13
Opium	6,15	...	6,15	− 37
Salt	46,79	...	46,79	+ 8,38
Stamps	27,15	27,19	54,38	− 1,86
Excise	34,60	34,61	69,21	+ 7
Provincial rates	...	39	39	+ 19
Customs	6	...	6	− 12
Income tax	8,94	8,94	17,88	+ 68
Forests	...	14,38	14,38	+ 83
Registration	...	3,53	3,53	− 25
Tributes	1,44	...	1,44	− 1
Interest	56	2,25	2,81	+ 16
Law and Justice—Courts of Law ...	...	5,88	5,88	+ 34
„ „ „ —Jails	...	4,09	4,09	+ 15
Police	...	1,73	1,73	− 30
Education	...	4,77	4,77	+ 28
Medical	...	86	86	+ 21
Agriculture	...	1,73	1,73	− 43
Scientific and Miscellaneous Departments ...	...	7	7	+ 5
Receipts in aid of Superannuation ...	1,15	83	1,98	+ 1
Stationery and Printing	79	79	1,58	+ 22
Miscellaneous	62	4,18	4,80	− 1,94
Irrigation Major Works	1,72,86	1,72,86	3,45,72	− 1,85
„ Minor Works	9,29	53	9,82	+ 3
Civil Works	1,03	4,04	5,07	− 1,09
Total ...	4,53,76	4,35,93	8,89,69	+ 18,54

REVENUE AND FINANCE.

Gross expenditure.

311. The gross expenditure, excluding expenditure of the Military, Railways, Post Office and Telegraph Departments and Capital expenditure on canals, was as follows :—

Major heads.	Imperial. Rs. 1,000.	Provincial. Rs. 1,000	Total. Rs. 1,000.	+ on figures − for 1913-14. Rs. 1,000.
Refunds	97	1,01	1,98	+ 16
Assignments	58	38	96	− 13
Land Revenue	...	49,87	49,87	+ 77
Salt	4,75	...	4,75	− 65
Stamps	85	86	1,71	− 21
Excise	1,07	1,08	2,15	+ 30
Income-tax	7	6	13	− 4
Forests	...	8,89	8,89	− 30
Registration	...	1,22	1,22	+ 2
Interest	1,26	1,86	3,12	+ 28
General Administration	4,58	13,27	17,85	+ 97
Law and Justice—Courts of Law ...	...	46,03	46,03	+ 3,48
„ „ „ Jails	...	15,86	15,86	+ 1,59
Police	...	62,49	62,49	+ 3,56
Education	...	42,20	42,20	− 2,49
Ecclesiastical	2,46	...	2,46	+ 1
Medical	...	28,23	28,23	+ 14,51
Political	6,24	...	6,24	− 69
Agriculture	40	11,46	11,86	+ 1,95
Scientific and Miscellaneous Departments ...	...	1,01	1,01	− 9
Pensions, Territorial and Political ...	73	...	73	− 9
Superannuation	3	22,61	22,64	+ 87
Stationery and Printing	30	7,70	8,00	+ 1,06
Miscellaneous	1,65	4,44	6,09	+ 1,53
Famine Relief	1,97	...	1,97	+ 35
Reduction or avoidance of Debt ...	...	1,40	1,40	...
Irrigation, Major Works	79,38	79,38	1,58,76	+ 9,97
„ Minor Works	9,97	1,82	11,79	− 43
Civil Works	5,65	91,63	97,28	− 6,14
Total ...	1,22,91	4,94,76	6,17,67	+ 30,73

37.—Land Revenue.

312. As explained in paragraph 497 of the Administration Report for 1911-12 the land revenue as given in the Land Revenue Report concerns the agricultural year ending 30th September, six months preceding the end of the financial year, so there must always be a difference in the total collections as calculated by the Treasury and by the Financial Commissioners' office in their yearly returns.

The Land Revenue Report for the year ending 30th September 1914 returns the following figures including collections on

account of previous years, comments on which have already been made in section 69 :—

	Rs.
Fixed Land Revenue	2,08,08,837
Fluctuating Land Revenue	1,18,07,642
Temporarily excluded from Fixed Land Revenue roll	6,59,859
Other Land Revenue	48,30,103
Total ...	3,81,06,441

or after deducting Rs. 1,11,52,983, due to irrigation, Rs. 2,79,53,458.

38.—Irrigation.

313. The total capital invested up to the end of 1914-15 on canals in operation, classed as Productive Major Works, was Rs. 17,17,13,716; the capital expenditure during the year was Rs. 39,26,106; the income from all sources, after deducting refunds, was Rs. 3,45,62,445. The working expenses amounted to Rs. 93,24,449, and the interest charges to Rs. 57,55,299. This leaves a net profit of 194 lakhs compared with 205 in 1913-14 and 192 in 1912-13.

The balance profit on Imperial Canals, Minor Works, not classed as Productive, was Rs. 9,47,214 and on Provincial Canals was Rs. 26,215 compared with Rs. 9,07,411, and Rs. 35,054, respectively, in the previous year.

39.—Excise and Opium.

General.

314. The year is marked by a general rise in the retail prices of all exciseable articles, a general decrease in consumption which was considerable in the case of liquor and small in that of opium and intoxicating drugs, a slight reduction in the number of licenses, and a stationary revenue. The rise in prices and decrease in consumption are mainly the result of the war and, to a lesser degree, are due to the institution, in the latter half of the year, of an organised campaign against illicit distillation and smuggling in certain selected central districts.

315. The total revenue realised during the year amounted to Rs. 69,21,091 against Rs. 69,08,669 in 1913-14. The increase of about Rs. 12,000 is due principally to the increase from vend license fees which amounted to Rs. 2,99,000 and duty Rs. 78,000, counterbalanced by the substantial drop of Rs. 3,19,000 in the receipts from still-head duty due to decreased consumption caused by the high prices of food stuffs and increased cost of liquor consequent on the war.

Liquor.

316. In pursuance of existing policy, the number of retail licenses for the sale of country spirits has been further reduced, from 766 in 1913-14, to 748 in the year under review; the number is now no more than 1 to every 133 square miles of territory and 26,000 of population and is lower, relatively to area and population, than in any other part of India.

317. In connection with the question of providing counter-attractions to drink in the shape of encouraging innocent recreations, it is satisfactory to notice the social service which is being performed by the increasing number of temperance associations and the wider development of their influence and activities. It is seldom that advisory committees, which exist in some of the larger towns, are called upon to exercise their functions in respect to the grant of new licenses for the sale of liquor, and it has been suggested that a better way of consulting public opinion would be by utilising the services of District, Local and Municipal Bodies: some Deputy Commissioners have already begun consulting these bodies.

318. The increase in the income from licenses for the sale of foreign liquor, which amounted to Rs. 14,594, has again this year been accompanied by a decrease in consumption of about 2,000 gallons : special or spiced

spirit made in the Punjab Distilleries, which appeared to be ousting the foreign article, has this year suffered a set-back, the consumption, as compared with 1913-14, having declined by nearly 10,000 gallons, the reason doubtless being that, in times of scarcity, the cheapest article is preferred, but it is also suggested that the taste for this form of liquor, which was largely a matter of fashion, is passing away.

319. During the year, owing to a rate war between the distillers and with a view to prevent undue competition in wholesale rates on the one hand and a possible combination to inflate prices on the other, the province was divided, in consultation with the distillers themselves and for distillation purposes, into vend spheres in which the local distillery has a monopoly of vend, subject to maximum and minimum limits of prices. This marks a definite change in the Provincial supply system, which has hitherto been free, and it is hoped that the arrangements will work smoothly and successfully.

320. The number of persons convicted for drunkenness in the municipal towns of the Punjab was 1,131, or 7 per 10,000 of population, as against 1,388 in 1913-14.

Opium.

321. There is a marked decrease of 3,605 sers in the recorded consumption of opium of all kinds, particularly in the case of the hill variety, but it is possible that the output of this form of opium may diminish considerably in the next few years as the result of measures taken to restrict the supply to the Nabha State which consumed $\frac{2}{3}$rds of the entire exports to the plains. As a result of the measures taken to put a stop to the combination of trades, the number of licenses in the hands of small shop-keepers in the Ferozepore District has been reduced by about 14.

322. The profits on the sale of excise opium amounted during the year to Rs. 6,33,565 or an increase of Rs. 3,933 only on the figure, Rs. 6,29,632, for the previous year, due to an increase in the issues from 54,748 sers in 1913-14 to 55,084 sers in the current year.

Charas.

323. The consumption of charas continues to decrease steadily; it has fallen from 23,628 sers in 1912-13 to 21,789 in 1913-14 and 21,694 sers in the present year. The reason assigned is the rise in duty coupled with high prices of food-grains, but examination of the prices does not support the contention that enhancement of duty tends to reduce consumption. Charas-smokers are mostly fakirs, and local fluctuations in consumption are probably connected with migrations of this class. District officers are unanimous in recommending an increase of duty, and proposals are now under consideration for raising the duty from 1st April 1916 to Rs. 14 per ser.

Bhang.

324. The consumption of bhang in the province fell from 92,471 sers in 1913-14 to 89,337 sers in the year under review. In connection with the question whether any measures can be devised to check the consumption of the drug, district officers were consulted and several noted that there is room for enhancement of the duty, but the Financial Commissioner is of opinion that there are, at present, no grounds for raising it beyond existing rates. There are indications in some districts that the consumption of bhang varies inversely with that of charas, and it would be a change for the worse if the practice of drinking bhang, which is in moderation perfectly harmless, were to be replaced in any degree by the deleterious habit of smoking charas.

Cocaine.

325. Though the number of cocaine licenses decreased by 10, sales to the public increased from 15,074 to 15,341 grains; this occurs in the Lahore and Simla Districts, where the increase amounts to 2,437 grains. A special enquiry was made to ascertain the cause of the increase in the Simla District, but without result; the cocaine was apparently issued on medical prescriptions and the trade is in the hands of old established

European firms. A large decrease of 846 grains in Rawalpindi is due to a licensee being prohibited from issuing the drug under his own prescriptions.

Important seizures of cocaine were made in the Ambala, Amritsar and Lahore Districts, which are the chief centres of illicit traffic in cocaine.

Excise offences and preventive measures.

326. The number of persons arrested for offences against the Excise and Opium laws increased from 871 to 1,023, but the number of convictions fell from 668 to 653, a decline from 75 to 65 per cent. of arrests, this apparent falling off in the convictions being due to the large number of cases to be instituted which were still pending at the close of the year. The increase in arrests is the result chiefly of the special campaign against illicit distillation and smuggling of liquor conducted by Mr. Kemball, Superintendent of Police, who was placed on special duty for the purpose. In the course of the campaign, the active part of which only lasted three months, 182 preventive raids were undertaken resulting in the detection of 63 complete and 35 incomplete stills and 83 cases of illicit possession of liquor; of the 182 cases two-thirds were in villages in which the practice of illicit distillation had not been suspected, an indication that in the past the volume of illicit consumption in the province has been considerably underestimated. The results of the campaign have led to the conclusion that the continuance of some such special organisation for the control and initiation of preventive measures is of the greatest importance.

327. There was one arrest for smuggling of cocaine, though important seizures were also made in Ambala, Jagadhari, Amritsar and Lahore, the chief centres of illicit traffic in the drug. The external sources of supply are chiefly Delhi and Saharanpur and at a conference held at Delhi in November 1914 measures were agreed on for improving co-operation among the preventive establishments of the provinces concerned.

328. The Excise Intelligence Bureau has continued to render useful service to the administration during the year.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

329. The quantity of salt excavated during the year was 38,48,176 maunds, an increase of 1·44 per cent. on last year's figure. 39,62,825 maunds or 12·90 per cent. more than last year were issued, and the sales amounted to over 42 lakhs of maunds, an increase of 20·78 per cent.

The price of 1 anna and 2 pies a maund was raised, with effect from 1st November 1914, to 1 anna and 6 pies a maund, and there was a net profit of Rs. 9,541 compared with a loss of Rs. 3,000 in 1913-14.

The through traffic sales amounted to over 37¼ lakhs of maunds and formed 94·44 per cent. of the total rail-borne trade of the division compared with 94·47 per cent. in 1913-14.

Mandi Mines.

330. The sales from the Mandi Mines, maunds 77,055, were less by maunds 17,302 or 18·34 per cent. than the sales of the previous year.

Sultanpur Salt Works.

331. The sales of Sultanpuri salt increased by 3,882 maunds to 27,036 maunds. The price at which salt was sold by the manufacturers at the Sultanpur Salt Works ranged from annas 4 to annas 6 a maund, the average price being 5 annas per maund.

Internal Branch.

332. Fees from licenses realized Rs. 4,846 this year as against Rs. 4,781 in 1913-14.

GENERAL.

333. Exclusive of the operations of Internal Branch, complete provincial figures for which are not published, the accounts for the Punjab, including excise duty, are as follows :—

Source.	*Receipts.*	*Charges.*	*Net receipts.*
	Rs.	Rs.	Rs.
Cis-Indus ...	46,41,872	4,59,347	41,82,525
Mandi ...	9,632	5,323	4,309
Sultanpur ...	27,472	9,959	17,513
Total ...	46,78,976	4,74,629	42,04,347

From the net receipts a sum of Rs. 80,000 has to be deducted on account of treaty payment to Bahawalpur.

41.—Stamp Revenue.

334. The total revenue derived from receipts under the Court Fees and Stamp Acts fell from Rs. 56,29,000 in 1913-14 to Rs. 54,42,000 in the year under report. Of the total decrease of Rs. 1,87,000 the receipts under Judicial or Court Fee stamps showed a decrease of Rs. 40,000, while non-judicial stamps showed a decrease of Rs. 1,44,000 due chiefly in the one case to the effects which the war and the prevalence of scarcity in certain districts have had on civil litigation generally, and in the other to the dislocation of business caused by the war and the late banking crisis. The admission by courts of petitions under section 4 of the Punjab Redemption of Mortgages Act, II of 1913, on payment of 8 annas stamp duty, is responsible for part of the decrease under the income from judicial stamps; but it is a matter for satisfaction that this reduction of legal charges has facilitated the redemption of land.

The total expenditure of the Department fell from Rs. 2,28,835 in 1913-14 to Rs. 2,21,498 in 1914-15.

During the year under report special attention was drawn to the orders requiring Excise Inspectors to inspect stamp vendors' registers. The number of cases in which insufficiently stamped or unstamped documents were detected by the courts showed an improvement.

42.—Income-tax.

General.

335. Assessments being for the most part based on the profits of the year before that in which they are levied, the present remarks reflect the conditions prevailing in the year 1913-14. That year, it will be remembered, was marked by a series of commercial failures beginning with the closing of the Peoples' Bank. Agriculturally the year was of less than normal prosperity, and prices of food-grains ruled high. The collections on account of the year's assessment rose from Rs. 1,680 to Rs. 1,748 thousand, an increase of 4 per cent. Collections on account of the year's demand rose slightly under all classes of salary, and the proportion of the tax on the salaries of private employés which is collected at the source continued to rise. It is now 45 out of 69 thousand.

Companies.

336. The figures for profits of companies increased by Rs. 20,000 and over 20 per cent., but this increase is entirely in the profits of companies assessed at over a lakh, and represents the growing earnings of the Southern Punjab Railway Company which now pays Rs. 87,659. It is perhaps a salutary result of the financial crisis that while Banking and Insurance Companies have decreased from 15 to 8, the number of industrial concerns, such as cotton and flour mills, has increased from 25 to 62 and their assessment from Rs. 7 to nearly Rs. 14 thousand. A recent ruling of the Government of India as to the method of determining the profits of companies will, it is believed, result in the assessment of income which has heretofore been held exempt.

Part IV.

337. The collections in respect of the year's assessment under part IV (other sources) rose by 3 per cent. from Rs. 1,193 thousand to Rs. 1,226 thousand. It is not altogether satisfactory that of this increase of Rs. 33

thousand, 18 should be on incomes under Rs. 2,000, or that of 1,231 assessees added to the list, to 862 should likewise belong to the lower classes of assessment and 424 the lowest class of all. The Financial Commissioner has no doubt that this is indicative of the tendency, commented on by several officers, of tahsil officials to fight shy of the rich in their tahsils and to make up their figures by an indiscriminate assessment of smaller men. The percentage of collections under part IV due to the lowest class (assessees under 1,250) is 17·3, a figure which is itself too great and is exceeded in many districts.

Group Assessment.

338. District Officers were invited to introduce the group system of assessment into such towns and for such groups and professions as they might consider suitable, but it cannot be said that the experiment has been very encouraging in its results in the districts in which it has been tried. It is, however, too early to pronounce it a failure and it will be introduced in some other districts during the current year.

339. An officer was employed on the special revision of the assessment of the Lahore District during the year. The result was an increase of the final demand under part IV of Rs. 6,000. Certain Commissioners speak strongly in favour of assessment by a professional agency, and, with the approval of Government, proposals are being prepared for the extension of the system in larger towns.

43.—Forest Revenue.

340. The total revenue for the forest year, 1st July 1914 to 30th June 1915, amounted to Rs. 1,466 lakhs, a net increase of 1·00 lakh over the figures of 1913-14. The chief increase (·58 lakh) was due to sale of wood on areas to be colonised. The revenue was distributed among the major heads as follows :—

	Rs.
Major produce, including drift ...	10·69 lakhs.
Minor produce, including revenue from forests not managed by Government...	2·92 „
Other heads	1·05 „
Total ...	14·66 „

341. The expenditure of the year was 9·02 lakhs, a net decrease of 3 lakhs. The net results of the working of the year are as follows :—

	Rs.
Cash surplus	5,64,139
Increase in value of stock in depôts ...	14,619
Increase in value of live and dead stock...	43,020
Total ...	6,21,778
Deduct—	
Decrease in outstanding of revenue ...	51,482
Net result in favour of the year ...	5,70,296

44.—Provincial Revenue.

General.

342. The provincial shares of the revenue raised and the expenditure incurred in the Punjab during the last two years, with the opening and closing balances in each year, are shown in the table below :—

	1913-14.	1914-15.
	Rs. (thousands).	Rs. (thousands).
Opening balance	1,77,84	*70,92
Income	4,32,33	4,35,93
Net transfers from Imperial to Provincial.	29,10	40,13
Total ...	6,39,27	5,46,98
Expenditure	4,68,35	4,94,76
Closing balance ...	1,70,92	52,22

*Excludes 1 crore surrendered to the Government of India from 1st November 1914.

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Income.

343. An improvement of Rs. 7,56,000 was recorded in the Provincial share of Land Revenue, to some extent owing to the enhancement of assessments in districts under settlement, and the recovery in a year of good harvests of most of the outstanding arrears, but chiefly because for the first time large receipts were obtained from the auction of land in Montgomery, which more than counterbalanced the progressive decline in the income from the sale of proprietary rights in the older colonies. There was also a normal growth in income-tax receipts and most of the minor sources of revenue, while owing to a brisk market for timber, and the sale of firewood from areas which were being cleared for colonization, the Forest Department realised nearly a lakh more than in 1913-14. On the other hand, the revenue from stamps and excise was reduced by causes directly or indirectly connected with the war; miscellaneous revenue suffered from smaller sales of land and houses, and from very heavy refunds of lapsed deposits; and the receipts of the Irrigation Department showed an appreciable shrinkage, mainly due to a smaller demand for canal water from the Sirhind and Upper Bari Doab Canals, owing to timely and sufficient rainfall.

Assignments.

344. The most important new assignment received in 1914-15 was one of Rs. 3,50,000 per annum in lieu of the sum of one crore surrendered by the Punjab Government from its provincial balance to the Government of India. In addition Rs. 3,30,000 were transferred to Provincial revenues for the improvement of the sewage system of Simla; Rs. 1,00,000 to cover the cost of provincialising the salaries of Civil Veterinary Department officers; and Rs. 1,49,000 to meet the extra expenditure thrown on Punjab revenues by the secession of the Province of Delhi.

Expenditure.

345. Under Agriculture, there was a considerable increase in expenditure mainly on account of the experiment for eradicating alkali from the soil which is being conducted at Narwala, and to improvements which are being made in the Lahore Zoological Gardens. Superannuation charges exhibited a normal growth of about one lakh, and stationery charges were higher by a similar amount, chiefly through initial expenditure on the new Government Press at Lahore. The expenditure on the maintenance of canals also showed a marked increase, of which the Provincial share was nearly $2\frac{1}{2}$ lakhs. There was a reversion in 1914-15 to the previous procedure whereby grants for medical and sanitary purposes were classified under the head 24—Medical instead of 45—Civil Works, in charge of Civil Officers; and the combined increase of nearly 12 lakhs under these two heads was due to the distribution of 10 lakhs among district boards for the construction and maintenance of roads, and to a more liberal allotment of funds for medical and sanitary works. For the rest, the increases, which led to an aggregate enhancement of nearly $26\frac{1}{2}$ lakhs in the expenditure of the year, can mainly be attributed to the effects of the war in Europe. The sharp rise in the price of food-grains made it necessary to grant compensation for dearness of provisions from September onwards at a cost of Rs. 3,00,000, while this factor, in conjunction with an increase in the jail population due to the disturbed state of the Province, swelled the charges of the Jail Department by a lakh-and-a-half of rupees. The recall of officers from leave, and the necessity for placing officers on special duty to cope with work arising out of the war were responsible for increases under the heads 3—Land Revenue charges of district administration, 18—Genreal Administration and 20—Police, while under the latter head extra expenditure was also incurred on punitive police posts, additions to the police force, and the re-organisation of the Criminal Investigation Department. Under 19-A—Law and Justice, a considerable sum was expended on the employment of counsel in the Delhi Conspiracy Case: and under Interest on debt, only part of the increase of Rs. 3,60,000 in the Provincial liability was accounted for by a growth in the capital at charge, the balance being due to the higher rate which it was necessary for Government to pay for its borrowings. Only under the heads 22—Education and 45—Civil Works,

in charge of Public Works Officers, was the expenditure substantially less than in 1913-14. Smaller grants were made to local bodies for the extension of education, as the assignments received for this purpose from the Government of India were nearly exhausted, and part of the amount placed at the disposal of the Public Works Department was withdrawn to meet the extra charges which arose in the course of the year.

45.—Local Funds.

346. The gross income of the district boards of the Province continues to expand and during the year amounted to Rs. 83,82,125—an increase of Rs. 2,16,757 on the income of the previous year. The total amount of Government grants was Rs. 2,27,276 greater than in 1913-14, and the local rate also produced Rs. 95,881 more, but these increases were to some extent counterbalanced by a considerable falling off in receipts from Cattle fairs, Sale of buildings and other property, and various other heads. Grants were made by Government to the amount of Rs. 32,50,606: in addition, contributions payable by district boards to Government, which in the previous year had amounted to about Rs. 2,19,000, were remitted.

347. Receipts under the head 'Education' were Rs. 62,765 less than last year owing to a falling off in Government grants which were less by Rs. 78,000: the income from fees and other contributions was, however, Rs. 18,000 better. The expenditure rose by 2 lakhs to Rs. 17,35,208, over 4 lakhs more than the income.

348. The income under the head 'Medical' was Rs. 4,628 more than in the previous year. The increase, however, was almost entirely due to the payment in advance of contributions for the following year to the district board of Rohtak. The charging of fees was introduced in Jhang, Rawalpindi, Ferozepore and Karnal, but except in Ferozepore resulted in no appreciable increase of income. Expenditure rose from Rs. 6,75,211 to Rs. 7,03,007, and would have been more but for the remission of certain contributions previously payable to Government.

349. Receipts under the head 'Civil Works' rose by over 4 lakhs to Rs. 28,14,656, the increase being due to largely augmented Government grants. Expenditure, however, which amounted to Rs. 35,46,684, was only about 1½ lakhs in excess of the previous year, chiefly owing to the fact that a large part of the Government grants was received too late in the year to be utilised. The construction and maintenance of buildings accounted for about 11 lakhs of the total and communications for about 17 lakhs, of which 4 lakhs were for construction and the remainder for maintenance.

350. In no case has any board allowed its balance to fall below the prescribed minimum, and in a number of cases balances are very high, particularly in Gujranwala (Rs. 3,59,360), Lyallpur (Rs. 3,19,501), Hissar (Rs. 3,11,658), Ferozepore (Rs. 2,99,694), Multan (Rs. 2,83,650), and Hoshiarpur (Rs. 2,16,628).

46.—Municipal Funds.

351. The aggregate income of municipalities again rose from Rs. 76,46,000 in the previous year to Rs. 82,92,902. Excluding loans and deposits, however, there was a considerable decrease amounting to about Rs. 2,35,000. The largest falling off was in the income from octroi which was less by over 2 lakhs, due to decreased imports of foreign goods owing to the war, and to the general tightness of money prevalent during the year. In spite of this reduction in the income, the expenditure rose by nearly 19 lakhs to Rs. 83,67,181, of which however 9 lakhs represent the amount of a grant to the Lahore municipal committee for drainage works which was invested, while about 3¼ lakhs were spent by the Simla municipal committee in connection with its Electricity Department. "Water-supply" accounted for an increase of Rs 65,000, and "Drainage" for an increase of Rs. 74,000. Expenditure on "Lighting" also rose by Rs. 34,000,

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and on "Hospitals and Dispensaries" by Rs. 30,000. Under the head "Public Instruction" there was an increase of about Rs. 26,000 though Government contributions for educational objects were less by Rs. 19,000. The gross increase of funds allotted to education by municipal committees from their own resources was therefore Rs. 45,000, a satisfactory feature. In the Ambala and Jullundur Divisions, however, expenditure fell by Rs. 22,000 and Rs. 12,000, respectively.

352. The amount of Government contributions fell by about Rs. 20,000, but against this must be set the remission of various contributions previously payable to Government by municipalities amounting to about Rs. 95,000. Of the total Rs. 13,63,371, about 2½ lakhs were distributed by the Sanitary Board; over 5 lakhs were given to Simla; 2½ lakhs to Multán; and Rs. 1,42,000 to Dera Gházi Khan.

353. Three small notified areas and the municipality of Zira failed to close the year with the prescribed minimum balance.

354. During the year loans were made by Government to municipalities to the amount of Rs. 8,91,797, of which Amritsar received 4½ lakhs for its electrification scheme and Simla Rs. 2,75,000 and Rs. 1,46,797 for the extension of the hydro-electric scheme and in connection with the improvement scheme, respectively.

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CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census.—Report on the Census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishan Kaul, C.I.E.

Births and Deaths.—Sanitation.— } Report on the Sanitary Administration of the Punjab and Proceedings of the Sanitary Boards for the year 1914.

Emigration.—Census Report as above.

Medical Relief—
- Notes on the Annual Statements of the Dispensaries and Charitable Institutions of the Punjab for the year 1914.
- Report of the Pasteur Institute, Kasauli, for the year 1914.
- Report on the working of the Punjab Lunatic Asylum for the year 1914.

Vaccination.—Notes on Vaccination in the Punjab for the year 1914-15.

PUBLICATION OF THE GOVERNMENT OF INDIA.

Statistics of British India, Part V, Area, Population and Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1913-14.]

48.—Births and Deaths.

355. This year again an estimated population has been prepared by adding births and subtracting deaths, and calculated on this population the birth-rate for the Province amounts to 43·8 and the death-rate to 30·2 : these rates are 2·5 and 1·8, respectively, lower than the rates calculated on the census population.

356. The year 1914 like its two predecessors was a healthy one; the death-rate was low and only slightly in excess of that for the previous year, while the birth-rate was exceptionally high, the highest on record since 1899. Plague, however, caused a higher death-rate than in the two previous years, while small-pox accounted for much fewer deaths; the death-rate under other heads remained practically stationary and fevers showed a very slight increase compared with the previous year.

357. The birth-rate during the year under report which amounted to 46·3 is the highest on record since 1899 when it was 48·4; the total number of births amounted to 895,006, of which 468,243 were males and 426,763 females. These figures are much in excess of those for the previous few years and are due to the healthiness of the Province during the two preceding years and the early part of the year under review. Owing to the ravages of malaria among the child-bearing population in 1908, the birth-rate in the following year was extremely low, but ever since then there has been a steady increase in the birth-rate until now it has reached a figure which has not been exceeded since 1878 except once in 1899. This most satisfactory state of affairs is due no doubt to the absence of malaria in epidemic form. Births.

358. Compared with the quinquennial average there are only 6 districts which had a lower birth-rate during the year under review: these are Simla, Kangra, Jhelum, Rawalpindi, Attock and Muzaffargarh, and the decrease in no case amounts to more than 1·8 *per mille*, while for the total of the province there is an increase of 3·5. On the other hand

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some districts show a very substantial increase, *e.g.*, Gurgaon 9 *per mille*, Montgomery 7·5, Rohtak 6·4, Ludhiana 6·3, and Ferozepore 6·1. In regard to these districts, which have a lower birth-rate than their quinquennial average, it may be remarked that their birth-rate last year was high and the decrease as compared to 1913-14 amounts to 3·8 in the case of Muzaffargarh, 3·6 in Attock, 2·2 in Simla and Jhelum, and 1·9 and 1·5 in Kangra and Rawalpindi, respectively. In three other districts also the birth-rate was lower than in the previous year, namely Rohtak, Gujranwala and Jhang: the reduction in Gujranwala, however, was very slight.

359. The excess of births over deaths amounted to 14·3 for the whole Province, but in individual districts the excess in some cases was very great, *e.g.*, 25·9 in Ferozepore and Lyallpur; in the others it varied from 21·2 in Lahore to 4·0 in Rawalpindi, when the least excess was recorded. Only two districts had a death-rate in excess of the birth-rate, but the excess was not great, 1·12 in Simla and 0·8 in Gujranwala. The conditions in Simla are different to those of districts in the plains and no explanation need be furnished for this slight difference, but in regard to Gujranwala it may be mentioned that the death-rate in this district was the highest on record, due chiefly to plague, the rate for which was 16·0 *per mille*, and it is only owing to the very high birth-rate that the excess was not greater. It must be remembered that a high birth-rate often leads to a high death-rate, as the deaths among young infants are always very high.

Deaths.

360. The total number of deaths during the year amounted to 618,073, of which 318,325 were males and 299,748 females, the total death-rate being 32·0 *per mille*. This rate is 1·8 in excess of that for the previous year and 0·9 in excess of the average for the previous five years. After two years of but slight prevalence, plague this year accounted for 64,010 deaths at a rate of 3·3; small-pox on the other hand accounted for much fewer deaths than in the three previous years: otherwise the death-rate for all the other diseases remained fairly constant.

361. The highest death-rate was recorded in Gujranwala 46·3, followed by 41·9 in Karnal, 37·3 in Gurgaon, 36·4 in Rohtak and Ambala, 36·0 in Amritsar and Gurdaspur, 34·5 in Ludhiana, 33·9 in Rawalpindi, 33·8 in Hoshiarpur, 33·1 in Sialkot and 32·7 in Jullundur. All these had a rate higher than the provincial rate, and in Gujranwala, Sialkot, Gurdaspur and Jullundur the rates were higher than those recorded in the previous year and also than their respective averages for the quinquennial period. Rohtak, Hoshiarpur, Ludhiana and Amritsar, on the other hand, showed an increase compared with the previous year, but a reduction as compared with their quinquennial average. Of the four remaining districts Gurgaon and Karnal show a reduction on both the previous year's figures and those for the quinquennium, while Rawalpindi shows an increase over the quinquennial average, but a reduction compared with the previous year: Ambala shews a reduction compared with the previous year only. The high rates in Gujranwala, Gurdaspur and Ludhiana were due to excessive rates from plague, and in Karnal, Rohtak, Ambala, Amritsar, Rawalpindi and Hoshiarpur to plague and fevers. In Gurgaon, Jullundur and Sialkot the death-rates from plague were above the provincial average.

362. The lowest rates were recorded in the districts of Simla, 20·8, Montgomery, 21·2, Dera Ghazi Khan, 21·3, Lyallpur, 24·8, Shahpur, 26·2, and in 11 others it ranged between 27·1 in Ferozepore to 31·7 in Hissar. In all these the rates were below those of the provincial total.

363. The highest death-rate this year occurred in May 3·21, December coming next with 3·02, September with 2·95, October 2·90, April 2·84 and November 2·80. With the exception of September, October and November, in which months only fevers were responsible for the high mortality, plague and fevers both combined to raise the death-rate in the other months mentioned above. In the remaining months of the year the death-rate varied from 2·11 in July to 2·57 in June.

364. The month of May always shows a rise in the death-rate. This in a non-plague year is due to fevers, April being a month in which mosquitoes are very active.

365. As usual infants under one year of age had the highest mortality amounting to 230·43 for males and 223·05 for females, figures for the previous year being 235·43 and 223·82, respectively. Calculated on the number of births during the year the rates work out at 208·98 and 211·38 for males and females, respectively. These are a great improvement on the rates for the previous year, showing a reduction of 8·63 in males and 4·75 in females.

366. Notwithstanding all the endeavours made to rectify the classification of deaths by classes, in Gujranwala and Attock the number of deaths recorded among "other classes" exceeded the population for that class this year. But this is not the only unsatisfactory feature in the statistics for the year under report, for in Sialkot the death-rate among "other classes" amounted to 396·30, in Dera Ghazi Khan to 333·33, in Muzaffargarh to 240·0 and in Lyallpur to 168·92. The Hindu and Muhammadan rates amounted to 31·95 and 31·94, respectively, while the rate for Native Christians was 32·51. The total provincial rate for other classes was 50·16, a satisfactory reduction compared with the previous year when it was 83·30, and it is hoped that the interest taken in the matter by the Sanitary Department will yet result in more accurate registration of deaths among this class of the population.

Cholera.

367. Cholera was rather more severely prevalent in 1914 than in the previous year. It caused 6,656 deaths, the death-rate being 0·34 as compared with 0·30 in 1913 and 0·13 in the quinquennium. Deaths from cholera were registered in 27 districts including 66 towns and 672 villages, the Lahore and Jullundur Divisions being most affected. The mortality was greatest in the Amritsar District where 1,288 deaths occurred, Lahore coming next with 788, Jullundur 750, Lyallpur 531, Hoshiarpur 499, Ferozepore 469, Ludhiana 390, Gurgaon 370, Kangra 347, Gurdaspur 312 and Sialkot 206: in no other district did the mortality amount to 200.

Small-pox.

368. The number of deaths from small-pox this year was 2,900 in all at a rate of 0·15 *per mille* which is the lowest on record since the introduction of the system of registration of deaths with the exception of the year 1910 when the rate of mortality under this head was exactly the same. It is 1·85 per 1,000 below the figures for the previous year and 0·68 below that of the quinquennial average. The decrease is doubtless due to the diminution of susceptible individuals owing to a great many of those who were not protected having died or having had themselves vaccinated during the long continuance of the epidemic from 1911 to the middle of the year 1913.

369. The average death-rate from small-pox for towns to which the provisions of the Vaccination Act have been extended was 0·13 *per mille* as compared with 1·21 in the previous year, while for those towns in which the Act is not in force it was 0·17 as against 2·13 in the previous year.

Plague.

370. There were 73,627 deaths from plague in the Punjab during the year. The deaths were three times more than in 1913, twice more than in 1912 and not half as many as in 1910 and 1911.

371. There was no respite from the disease during the year as will be seen from the monthly death figures given below:—

Number of deaths from plague month by month during 1914.

January	1,640	July	221
February	3,602	August	231
March	10,257	September	246
April	21,358	October	676
May	18,862	November	3,260
June	4,075	December	9,199

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372. The attitude of the people towards plague measures varies. When there is danger of infection, the people as a rule accept assistance and co-operate with the special medical staff. When there is no immediate danger of plague infection the people do not want to be worried with plague measures. In judging the attitude of the people we have to take into account the ability and energy of individual medical officers. Some officers on special duty do ten times more work than others. They work in harmony with the people smoothly and efficiently. The people do not want to die of plague and the object of the special medical staff is to prevent plague, so the staff and the people work together with the common object of preventing the disease : they are friendly allies fighting plague. A few officers on special duty are unable to enlist the sympathies of the people to any such extent. It is much easier to go from village to village and enter in a diary that "the people are adverse to all plague measures" than it is to overcome any prejudices that may exist and set to work to prevent the disease.

Fevers.

373. There were 345,501 deaths recorded under the head of "fevers" during the year under report. This was somewhat higher than it has been in the four previous years. The fever rate works out at 17·87 *per mille* as compared with 17·15 in the year preceding and 16·87 for the quinquennium.

49.—Emigration and Immigration.

374. There is nothing to report under this head.

50.—Medical Relief.

Institutions and patients.

375. There were 467 dispensaries in the Province at the close of the year 1914, against 466 in the previous year. During the year 14 were opened and 13 closed, while two private-aided institutions were taken over by the Gujranwala District Board.

There were 4,867,385 patients treated during 1914 in general local fund hospitals and dispensaries and purely female dispensaries compared with 4,591,177 in 1913, being an increase of 276,208. Of the total number treated, in-patients account for 88,774 and out-patients for 4,778,611, showing an increase of 3,576 in the case of the former and 272,632 in the case of the latter over the figures for the previous year.

Of the total number of in-patients 65,931 were returned as cured, 13,839 relieved, 5,535 discharged otherwise and 2,053 died. The ratio of deaths per cent. of total treated was 2·31 against 2·20 during 1913.

The total number of beds available was 4,289 (2,640 for males and 1,649 for females), a larger number by 158 than those maintained in the preceding year. Although, taken as a whole, the accommodation provided in the Province is far in excess of the average daily attendance, overcrowding is noticeable in all the hospitals where surgical work is done on a large scale.

Statistics of diseases.

376. The following abstract shows the most important diseases and conditions for which people attended dispensaries :—

Cholera	991
Dysentery	63,760
Enteric Fever	1,328
Malaria	639,160
Pneumonia	7,244
Rheumatic fever and Rheumatism	91,259
Tubercle of the lung	5,070
Other tubercular diseases	6,120
All other infective diseases	9,848
Anæmia	35,054
Diabetes	1,400

Scurvy	6,163
Diseases of the nervous system	92,232
Diseases of the eye	985,975
Diseases of nose	26,744
All diseases of the respiratory system except pneumonia and tubercle of the lung	274,679
Dyspepsia	201,577
Diarrhœa	51,704
Abscess of the liver	531
All other diseases of the liver	9,766
Bright's diseases	1,470
All other diseases of the urinary system	24,777
Other diseases of the generative system	45,283
Diseases of the organs of locomotion	21,637

Surgery.

377. During the year 260,775 operations were performed against 250,261 in 1913. The selected operations numbered 37,048 against 36,590 in the previous year. Of the patients operated on during the year 529 died, giving a death rate of ·20 per cent. compared with ·18 per cent. in 1913. Cataract operations numbered 14,919 and of the number of patients operated on 95·58 per cent. obtained good vision. Amritsar and Moga are the two places where most of these operations were performed. Operations for stone in the bladder accounted for 2,115 in 1914 compared with 2,273 in 1913 : the Multan and Dera Ghazi Khan Districts were responsible for the largest individual numbers.

Government dispensaries.

378. The total number of patients treated at State, Special and Railway dispensaries during the year was 561,387 compared with 500,157 in 1913. Police hospitals treated 6,137 in-door and 49,081 out-door patients, Canal dispensaries 241 in-door and 239,245 out-door and Railway dispensaries 1,247 in-door and 245,269 out-door patients. The throwing open of a greater number of Canal dispensaries to the general public is responsible for the rise in the number of patients treated during the year.

Private institutions.

379. Private non-aided dispensaries treated 4,781 in-door and 84,577 out-door patients, but these figures do not correctly represent the extent to which medical relief is afforded by these institutions as many of these dispensaries do not submit returns.

Income.

380. The income for the year amounted to Rs. 14,07,538 as against Rs. 13,12,926 in 1913. The increase is the result of enhanced contributions both from Government and local bodies. There is a slight fall in the amount of private subscriptions which is probably accounted for by the heavy calls upon the public for their assistance towards relief funds connected with the war : nonetheless a number of handsome donations have been given.

Mayo Hospital.

381. The Mayo Hospital has continued to maintain its reputation and the attendance during 1914 was the highest on record. This record will no doubt be surpassed when the extensions in connection with the King Edward Memorial Scheme are completed.

During the year accommodation was provided in the hospital for 50 sick and wounded officers and men of the Indian Army from Overseas as also in the civil hospitals at Karnal and Jullundur.

Females.

382. An encouraging feature in the year's work is the increase in the number of females seeking treatment. A number of local fund institutions have female Sub-Assistant Surgeons attached to them and it is hoped that as the facilities for the unsectarian training of all classes offered by the Punjab Medical School for Women, which is incorporated with the Women's Christian Medical College, Ludhiana, become known and local bodies endow scholarships for their own nomination in addition to those already provided by Government, more women will be available for the

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staffs of Civil Hospitals as Sub-Assistant Surgeons, Compounders, Nurses and Dais. During the year the services of Dr. Balfour of the Women's Medical Service were lent to the Punjab Government to assist the Inspector-General of Civil Hospitals in the inspection of female hospitals and the supervision of female medical education and training.

Punjab Lunatic Asylum.

383. During the year the number of inmates increased by 32, the total population being 991 (775 males and 216 females). The present Asylum was opened in 1900 and the inmates that year numbered 608 (487 males and 121 females). This increase in the Asylum population during the past fifteen years cannot be ascribed to any general increase of lunacy in the Province, as according to the Census figures of 1911 the ratio of insanes per 100,000 of population has decreased from 35 to 26 compared with the Census figures for 1901. The demand for admission has probably been stimulated by the provision of ample accommodation and the centralisation and specialisation of the treatment of lunatics which has greatly improved their lot and in no small measure to the care and sympathy bestowed upon them by the authorities in charge. The experiment of employing two non-commissioned officers of the Indian Army has proved a great success. There is also a European Warder to look after European patients. The increase in the number of female admissions is particularly gratifying when it is considered that the majority of Indians have a conservative dislike to admit their womenfolk for treatment in any public institution and particularly in an asylum. The percentage of cures continues satisfactory.

The total annual cost of the Asylum was Rs. 1,79,229.

51.—Sanitation.

Sanitary Board.

384. The Sanitary Board met five times during the year, twice in Lahore and three times in Simla.

Grants.

385. As the balance of the annual grant of Rs. 1,50,000 for the previous year was only Rs. 929-8-0, the Sanitary Board applied to Government for further funds to be placed at their disposal for distribution to municipalities till the commencement of the next financial year, as a large number of sanitary schemes were pending with the Board for grants-in-aid. The Government placed at the disposal of the Sanitary Board a further sum of Rs. 50,000 for distribution to municipalities, and from this sum and the balance of the previous grant, grants-in-aid were made between 1st January and 31st March 1914 and a balance of Rs. 85-8-0, which remained unexpended at the end of the financial year, lapsed.

The year 1914 was a notable one in the history of the Sanitary Board, Punjab. The annual grant was enhanced from a lakh-and-a-half to seven lakhs-and-a-half, but for circumstances which rendered a reduction in this amount necessary and a consequent withdrawal of Rs 3,75,000, the Sanitary Board would have been able to dispose of the entire grant.

The grant of 7½ lakhs consisted of the following grants :—

	Rs.
Urban grant	3,00,000
Rural grant	2,50,000
Grant for unforeseen large schemes	2,00,000
Total ...	7,50,000

Urban sanitation.

386. Out of the urban grant of three lakhs placed at the disposal of the Sanitary Board, Punjab, during the year 1914-15 grants were made up to 31st December 1914, leaving a balance of Rs. 82,209 which will be accounted for in the next year's report.

A grant-in-aid of Rs. 2,700 was originally made for experimental works, but the Sanitary Engineer refunded Rs. 2,100 at the end of the year.

387. Out of the grant of two-and-a-half lakhs for rural sanitation placed at the disposal of the Sanitary Board, Punjab, during the year 1914-15, grants were made up to 31st December 1914, leaving a balance of Rs. 2,40,436 which will be accounted for in next year's report. The Board had estimated that it could not spend more than Rs. 75,000 during the current financial year. Rural sanitation.

388. The grant of two lakhs for unforeseen large schemes placed at the disposal of the Sanitary Board, Punjab, during the year under report was withdrawn. A request was made to finance the Dera Ghazi Khan water-supply extension scheme from this grant, but as it was not accepted a portion of the cost was financed from the urban grant to start the work. Miscellaneous.

In addition to the grants made by the Board during the year 1914, the following schemes received grants from Government to the extent of the amount noted against each :—

	Rs.
Lahore storm water outfall drainage	16,359
Ferozepore intra-mural drainage	12,000
Multan drainage	1,00,000
Multan water-works	1,50,000
Bhera drainage	33,500

The grant of Rs. 7,114 for the Nawankot drainage and pavement recommended to Government last year was refused by the Board this year, as neither the villagers nor the district board would agree to finance half the cost of the scheme which under the circumstances had to be abandoned. The Nurpur (Kangra District) water-supply scheme was abandoned by the order of the Government as the notified area was unable to finance half the cost locally and the grant-in-aid of Rs. 6,000 allotted in 1906 was withdrawn and refunded to Government.

389. It may be said without exaggeration that the year has been one of special activity and interest and that the demands made on the Board have steadily increased in number and importance. Government has recognised the necessity of meeting these demands and has increased the annual grant from a lakh-and-a-half to seven-and-a-half lakhs. The people are now more enlightened and are beginning to recognise the necessity of sanitation, and the Government has therefore extended the functions of the Board by authorising it to accord administrative sanction to all sanitary schemes, the cost of which does not exceed one lakh, and has also authorised the Board to allot grants-in-aid to schemes of rural sanitation without reference to Government. The question of utilizing Voluntary Sanitary Associations to help the Board chiefly in connection with the improvement of rural sanitation in the province is under the consideration of Government. Government has also ruled that grants-in-aid sanctioned should be allotted to the municipality or district board concerned irrespective of the agency to be employed in carrying out the work. Growth of Sanitary Board's powers.

390. The income derived from the sale of street sweepings in municipal towns during the year amounted to Rs. 1,40,520, showing an increase of Rs. 18,074 over last year's income. The largest sums were realized in Lahore, Amritsar, Sialkot and Gujranwala. Utilisation of refuse and sewage.

In the principal towns there were 1,748·38 acres of land under sewage irrigation and Rs. 33,489 were realized for its use during, the year, showing an increase of 229·43 acres in the land thus irrigated and Rs. 6,968 in the amount realized.

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Although rewards were offered by the Gurgaon, Ambala and Ludhiana District Boards as usual, no effort was made by any village community to earn it.

In the Gujranwala District sanads signed by the Deputy Commissioner were granted to 15 zaildars and sufedposhes who did good work in respect of village sanitation.

Fairs.

391. Owing to rain on the 6th and 7th April, the gathering at the fairs at "Choa Saidan Shah and Katas" in the Jhelum District was not as large as last year. It is estimated that only about 20,000 persons attended at Choa and about 12,000 to 16,000 persons at Katas. The fair at the former place was held on the 9th and at the latter on the 13th. Adequate sanitary arrangements were made, and the Additional Deputy Sanitary Commissioner, Punjab, was detailed to supervise them. There was no case of contagious or infectious disease, but a case of suicide was reported.

The attendance at the Sun Eclipse Fair held at Thanesar on the 21st August was not as large as was expected, the attendance being about 130,600 compared with that of 262,000 in October 1911. Cholera was present in the province, and the issue of railway tickets to persons attending the fair from infected areas was prohibited. Pilgrims arriving by train and the main roads were medically inspected and those found obviously ill were not allowed to enter the fair area. The Civil Surgeon, Karnal, was in charge of the medical and sanitary arrangements and the Sanitary Commissioner supervised the sanitary arrangements which were very satisfactory.

The Gullu Shah Fair in the Sialkot District commenced on 2nd October and lasted for ten days. Wells were cleaned out and treated with permanganate of potassium a short time before the fair was held, and a number of tube wells were provided for drinking water for those in the fair area. The medical and sanitary arrangements were placed in charge of an Assistant Surgeon, one compounder and four vaccinators. No case of unusual sickness was reported to have occurred.

A meeting was held on the 10th October at "Nankana Sahib" to consider the arrangements to be made at the fair. The meeting was attended by the Additional Deputy Sanitary Commissioner, Punjab, and rules were framed for the management of the fair. The fair was held on 2nd November, and Lieutenant-Colonel S. Browning Smith, I.M.S., the Sanitary Commissioner, Punjab, paid a short visit to the fair, to see that the rules framed were actually observed. No unusual sickness or accident of any kind was reported to have taken place.

The supervision of the sanitary arrangements at the "Baba Farid Fair" held at Pakpattan on the 24th and 25th November was as usual entrusted to the Additional Deputy Sanitary Commissioner, who arrived at the place on the 21st idem. The fair passed off without any accident owing to the elaborate arrangements made by the Civil and Police authorities.

52.—Vaccination.

392. The number of operations performed by all establishments in 1914-15 was 836,639 as compared with 887,469 in the previous year. Of the total number of operations 671,261 were primary and 165,378 re-vaccination as against 671,183 and 216,286 in the year preceding, an increase of 78 operations in the case of primary and a decrease of 50,908 in that of re-vaccination, which is manifestly due to the increased demand for the same in the previous year on account of the great prevalence of small-pox.

393. Of the total number of primary operations 642,778 were performed by the district staff, 23,328 by the special staff, 3,775 by cantonment vaccinators and 1,380 at dispensaries with a percentage of success of 97·15, 96·25, 99·08 and 97·07, respectively. The people on the whole are well disposed towards primary vaccination, but it is still a matter of difficulty to persuade parents during years when there is very little small-pox to have their girls revaccinated. The percentage of males to total number of re-vaccinations was 68·55, while in the case of females it was 31·45 or 50 per cent. of the former.

394. In 1914-15 the cost of the department amounted to Rs. 1,46,947, an increase of Rs. 13,216 on the previous year. This has been mainly due to the pay and travelling allowance of the Additional Deputy Sanitary Commissioner, increase in the pay of the District Vaccination Staff, their horse and travelling allowances, and contingent charges of the Punjab Vaccine Institute, Lahore, the outturn of which is greatly increasing. During the year the contributions towards the pay of Divisional Inspectors previously levied from district and municipal funds have been remitted by Government and are now paid from Provincial revenues.

395. The average cost of each successful vaccination was Re. 0-3-3 as compared with Re. 0-2-10 in the previous year. If, however, the sum of Rs. 21,974, which has been credited to Government on account of the cost of vaccine sold, is deducted from the total expenditure, the average cost works out to Re. 0-2-9 for the year under report as compared with Re. 0-2-4 in the preceding year. The increase in the cost of a successful case is due partly to the increase in the number of successful re-vaccination and partly for the reasons given in the preceding paragraph.

396. Seventy-nine per cent. of the total number of children under one year of age available for vaccination were protected against small-pox in the towns in which the Vaccination Act is in force as compared with 67 per cent. in those towns in which it is not compulsory. The corresponding figures for 1913-14 were 78 and 69.

397. The work done in Native States, which maintain their own establishment, was as follows:—

Patiala 49,608 primary and 28,172 re-vaccinations with a percentage of success of 98·63 in the former and 73·18 in the latter; Bahawalpur 14,169 and 103 with a percentage of 93·67 and 53·19; Kapurthala 3,675 and 179 with a percentage of 99·62 and 65·92. In Jind and Nabha 10,294 and 324 primary operations were performed with a percentage of success of 96·56 and 85·08. In Faridkot 4,703 primary and 20 re-vaccinations were performed with percentage of success of 99·31 and 42·86 respectively.

398. The institute supplied vaccine lymph to Civil Surgeons throughout the Province, to Native States in the Punjab, to the North-West Frontier Province, Jammu and Kashmir States, and Military Medical Officers, etc. The total number of tubes issued was 31,726 as compared with 33,329 last year. Punjab Vaccine Institute, Lahore.

In addition to this the Vaccine Institute supplied 10,000 capillary tubes to the Military authorities for use out of India.

Out of 31,726 tubes issued during 1914-15 results were received in the case of 30,022 tubes, showing that 980,906 primary and 199,514 re-vaccinations were performed with an insertion success 96·10 per cent. in primary and 63·44 per cent. in re-vaccination as against 95·17 and 69·01 respectively in the previous year.

Pasteur Institute.

399. Year after year there has been an increase in the number of patients treated in the Institute. The year 1914 was no exception to the rule, the number rising from 3,984 in 1913 to 4,585. There is no evidence, however, that rabies is on the increase in India, the results

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indicated above being due to greater dissemination of knowledge of the efficacy of the treatment. Of the 4,585 persons treated 4,124 were Indians and 461 Europeans. Of these, 53 persons died; the percentage of failures, *i. e.*, of deaths more than 15 days after the patient's discharge, was only 0·57. The year's experience confirms the views already held as to the value of cauterisation. During 1914 a fourth row of quarters for indigent patients was completed: accommodation for this class of patient is, however, still insufficient. The rabies hospital will shortly be ready for occupation.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this Chapter will be found in the report and statistical tables noted below:—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education in the Punjab for the year 1914-15.

(2) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1915.

(3) Annual Report of the Punjab Veterinary College and of the Civil Veterinary Department, Punjab, for the year 1914-15.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1914-15.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Part III, Educational.

53.—General system of Public Instruction.

[*Vide* pages 173—184 of the Administration Report for 1911-12.]

54.—Education.

GENERAL SUMMARY.

General.

400. The year 1914-15, though not marked by any outstanding educational developments, showed a satisfactory increase in the number of scholastic institutions and of pupils under instruction. At the same time the rate of progress in the provision of new hostels and school buildings was more than maintained, over 450 buildings having been constructed or been under construction during the year, and the capital expenditure on education having exceeded that of 1913-14 by seven lakhs.

Institutions.

401. There was an increase in the number of educational institutions in the Province of 526, but the attendance only rose by 15 thousand as compared with 34 thousand in the preceding year. A cause for this is suggested under the head of Secondary education. The percentage of school attendance of the estimated total population of school-going age has risen from 22·7 to 23·11 in the case of boys and from 4·76 to 4·81 in the case of girls.

Expenditure.

402. The total expenditure on education rose by nearly 14 lakhs to a little more than a crore and seven lakhs. Of this sum fees and private sources (*i.e.* subscriptions and donations) contributed one-third, provincial revenues rather less than a third (34 lakhs), Imperial revenues 7½ lakhs and Local Funds 29½ lakhs.

Staff.

403. The sanction of the Secretary of State was received to the appointment of an Assistant Director of Public Instruction and five additional Inspectors, three in the Indian Educational Service and two in the Provincial Service. It is intended to post two Inspectors in each Division, one being in the Imperial and one in the Provincial Service. Two of the Indian Educational posts were filled by the transfer of officers from Sanawar and the Government College, Lahore, their places being taken by recruits sent out by the Secretary of State from England. It was impossible, however, to proceed further with the scheme for the new Inspectorate owing to the difficulties of recruitment caused by the war.

Local Bodies.

404. The total expenditure of District Boards on education rose from 22 to 24½ lakhs, out of which 12 lakhs were spent on the maintenance of primary schools and 7 lakhs as last year on school buildings. District

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Boards had, however, estimated for an expenditure of 34 lakhs on education (exclusive of Government grants), so that a sum of 8 lakhs remained unspent from their educational budgets. Municipalities increased their expenditure on education from $4\frac{1}{2}$ to $5\frac{1}{4}$ lakhs, but they have done little for primary education. The different denominational agencies continued to evince great keenness in education, but their activities are largely directed to the multiplication of Anglo-Vernacular Schools. On the other hand some very good new buildings and hostels were erected for ill-housed schools.

Primary Education.

405. The steady annual increase in the number of primary schools continues. There were 394 such schools opened during the year, of which 238 were Board Schools. The attendance rose by over 8 thousand.

The total expenditure on primary schools amounted to Rs. 13,58,000, an increase of $1\frac{3}{4}$ lakhs over the figures of last year, the major portion of the increase being due to enhanced Government grants.

Teachers.

406. The introduction of graded services for elementary teachers under District Boards continues, and there are few Boards now who have not adopted some such scheme. These services usually contain posts ranging from Rs. 12 to Rs. 30, a scale of pay which should, and indeed is, proving decidedly attractive to the students of Vernacular Middle Schools.

Secondary Education.

High and Middle Schools.

407. The number of secondary schools increased by 35 to 379 and the number of pupils from 97,570 to 101,584. Of these 35 newly recognised schools 14 were High Schools, 7 Anglo-Vernacular Middle, and 14 Vernacular Middle. The Jullundur Division, with three High and eight Middle Schools, easily heads the list in the matter of new Anglo-Vernacular institutions. It is open to grave doubt whether much of the money spent in opening new secondary schools might not have been more profitably spent in setting existing institutions on a more satisfactory basis. If one community, for example the Sikhs, opens an Anglo-Vernacular school in a town of moderate size, it appears to be regarded as almost a matter of honour for the members of other communities in that town to set to work to found rival denominational institutions, whether there is any real demand for them or not.

408. It is for this reason that the increase in the number of secondary schools has not been followed by any proportionate increase in the number of scholars. In many cases the new schools do not tap any new educational source, but simply draw off scholars from existing institutions. Had the money, which has been spent by a community on founding a weak local High School, been directed towards strengthening the endowment and providing additional hostel accommodation at the nearest established High School building to the sect, the needs of the community for denominational education would have been far more efficiently met. The evils resulting from the multiplication of these inefficient institutions under weak control, to which allusion was made in last year's report, have been even more marked during the year under review. Nor can it be claimed that the work of the High Schools has increased in efficiency. The lack of any aim save the passing of as many boys as possible at an external examination, in the hope that they will thereby obtain Government appointments, vitiates the whole High School course.

School Final Examination.

409. A proposal to institute a School Final Examination was instituted towards the close of the year and was under discussion by the Local Government and the University. The effect of such an examination which would emphasise the importance of ordinary school work, thus minimising the importance of the final examination, and would at the same time allow for a wider differentiation of courses in High Schools should produce a marked improvement in the conditions of secondary education.

Collegiate Education.

Institutions.

410. The number of Collegiate institutions remained the same as in 1913-14, but the attendance at them further increased by 338 to 3,514. The expenditure rose slightly, the major portion of the increase being covered by the additional income from fees.

The Government College staff was strengthened by the addition of a Professorship in Persian. The new physics laboratory attached to this institution is under construction, while considerable improvements have been made in the chemical laboratory and the departments of Zoology and Botany.

Affiliation.

411. Extensions of affiliation were granted to various colleges in particular subjects, and grants were made by the University for various college libraries.

Accommodation.

412. The rush of students for admission into the Lahore Colleges at the beginning of the session is now becoming a serious problem, especially in view of the limited hostel accommodation.

Training Institutions.

Central Training College.

413. The competition for admission into the Central Training College shows no sign of abatement, and is a satisfactory indication that in the Punjab the value of training in the work of a secondary school teacher has obtained general recognition. Definite steps were taken towards the opening of a junior Training College at Jullundur which will relieve some of the pressure.

Normal Schools.

414. The number of Normal Schools increased to seven, a new school of this class being opened at Karnal. The work of these schools is supplemented by training classes which are opened by District Boards and attached to Vernacular Middle schools. The course in these institutions lasts for nine months. There were 17 of them in existence at the close of the year, and though the training in them cannot of course compare in thoroughness with that given in a Normal School, they yet fill a temporary need created by the sudden demand for qualified teachers for the newly opened primary schools.

The Normal School for Women showed a further increase of pupils from 64 to 92; and may fairly claim to have established its reputation. Qualified teachers who have been through the course are enabled to obtain very satisfactory salaries in aided institutions.

European Training Class.

415. For the first time the number of applicants for admission to the European Training Class, Sanawar, exceeded the number of vacancies; and the class contained 20 students at the close of the year. The building in which it is housed and taught is unsuitable, and the question of a new building is now being considered.

Professional and Technical Education.

Agricultural College.

416. The reorganisation of the courses at the Agricultural College and the lowering of the cost of the agricultural course appears to have had the desired effect by considerably increasing the number of applicants for admission. Considerable additions and extensions were made to the building.

Law and Medicine.

417. The Law College was transferred to the western portion of the old Convent purchased by the University. There was a slight increase in the number of students attending this institution and the Medical College. There was a considerable fall in the number of pupils attending the Medical School, owing to the names of 90 military students being struck off the rolls for insubordination. Female students will in future attend the Women's Christian Medical College, Ludhiana, with which is incorporated the Punjab Medical School for Women.

Mayo School of Art.

418. Classes in cotton-printing and polishing were added to the Mayo School of Art, which now lacks only book binding to complete the original scheme. The opening of this section has been unavoidably postponed

owing to the impossibility of obtaining the machines from England. Workshop hours have been lengthened to eight hours a day and a works overseer appointed in order that the students may work as far as possible under actual commercial conditions.

Industrial Schools.

419. The number of industrial schools in the Province has risen from 24 to 28 with 2,540 pupils. These institutions however need careful remodelling if they are really to fulfil the function for which they have been founded.

Education for Indian Women.

Girls' Schools.

420. There was again a large increase in the number of girls' schools which rose from 830 to 919 with two thousand additional pupils, the majority of whom represent admissions into the lower primary classes.

Thirty-nine of the new schools were opened by local agencies and 44 were private aided schools. The housing conditions of girls' schools, especially in municipalities, still leave much to be desired. There is naturally a dearth of qualified teachers, but the growing number of students at the Normal School for Women gives reason for hope.

There is an increasing demand for Anglo-Vernacular education for girls, but a great dearth of teachers qualified to meet it.

The number of appearances and passes at the Middle Examination is almost the same as in 1913-14.

Education of Europeans.

421. One additional school was opened at Bahawalnagar and the total attendance rose to over 2,700 pupils.

Various liberal building grants were made by Government to aided institutions, and a new building was commenced for the Lawrence School, Ghora Gali. On the whole the European schools may be said to be satisfactorily housed, though they are some of them deficient in equipment.

The cadet movement, which has always flourished in the boys' schools in the hills, proved its value on the outbreak of the war. A large number of *ex*-pupils have joined the army in all branches and grades. The Lawrence Military Asylum was able to send a contingent of boys and masters as a complete unit.

Muhammadan Education.

422. While there is a fair increase in the number of Muhammadans attending primary schools, there has been unfortunately an actual decrease in the number attending Anglo-Vernacular secondary schools. No satisfactory explanation of this phenomenon has been given.

There has been, on the other hand, a remarkable rise amounting to 12 per cent. in the number of Muhammadan girls who attend school. The community also continues supplying the majority of the students at the Veterinary College, the Mayo School of Art and industrial institutions.

The Anjuman-i-Himayat-i-Islam after collecting the opinion of the leading Muhammadan societies and individuals on the question of Muhammadan education in the Province embodied them in a memorandum to Government which is still under consideration.

Aitchison College.

Chiefs' College.

423. The college had 110 students on its rolls at the close of the year, which under existing circumstances is the maximum number for which it can properly provide. Of the eight boys presented for the diploma examination, five passed, three of these with honours. The remaining three passed in the aggregate though failing in one or two qualifying subjects. The annual competition with the Mayo College, Ajmere, resulted in a close contest, in which the Aitchison College regained the challenge shield. The inspection report on the college was generally satisfactory.

Several *ex*-students of the college are now serving their Emperor in Europe and East Africa.

55.—Literature and the Press.

LITERATURE.

424. The total number of publications brought on the catalogue has risen from 1,642 to 2,221, the highest on record. The increase is due, as stated last year, to measures taken to insure a regular supply of books for registration by the managers of printing presses. Books registered.

One hundred and fifteen copyrights were registered during the year, but the practice of registering copyrights, which lingered in spite of the new Copyright Act, has now been entirely stopped.

Of the 2,221 works, 1,575 were original, 479 republications and 167 translations. Urdu with 964 works has regained its leading position, Punjabi comes next followed by English. All vernaculars excepting Sindhi have a larger representation than last year.

425. The volume of verse grows in bulk every year, the total number of poetical works this year reaching the high figure of 624. But works of real merit are as yet rare : men with a certain facility for verse-making use it as a convenient medium for advice on matters social, moral and economical. After poetry religion forms the subject of the largest number of publications. There is a noticeable increase in the number of commentaries and translations of sacred books brought out with a view to satisfying the growing spirit of enquiry. It must, however, be admitted that the controversial tendencies displayed in literature of this class show no signs of abatement. The increase under Biography is noteworthy. The novel is being employed increasingly to expose social evils. History for the most part is confined to school books, but includes three or four books of real merit. The headings of Art and Travel continue to be poorly represented, but there is a rise of 47 per cent. in the number of books which treat of Medicine. Under this head are found works on Veterinary Materia Medica and Therapeutics and Vaidak and Yunani books of the type of Moore's Family Medicine. To sum up, there has been a noticeable increase in the number of publications during the year ; but it can hardly be said that this has been accompanied by a corresponding improvement in literary quality. Subjects treated.

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426. The total number of newspapers and periodicals of all kinds published in the Punjab and the North-West Frontier Province during the whole or part of the year under report was 275 as compared with 232 in the year 1913. This is the highest figure ever recorded, the previous highest being 253 in 1909, the year preceding the passing of the Press Act. In the above number are included 85 papers started during the year and 49 which ceased publication during the same period. The following table shows the detailed figures for the two provinces :— Newspapers.

	Existing at the beginning of year.	Came into existence during the year.	Ceased to exist during the year.	Existing at the end of the year.	Net increase.
Punjab	189	83	48	224	35
North-West Frontier Province ...	1	2	1	2	1
Total ...	190	85	49	226	36

Of the 275 newspapers and periodicals which were in existence during the whole or part of the year 175 were published in Urdu, 54 in English, 29 in Gurmukhi, 13 in Hindi, 2 in Roman Urdu, 1 in Urdu-Pashtu

and 1 in Urdu-Hindi. The number of daily papers was 26, while weekly and monthly publications numbered 85 and 126 respectively. Other papers appeared at irregular intervals. Of the 26 daily papers 5 were in English and the remaining 21 in the vernacular, 10 of the latter representing the Hindu community, 5 the Muhammadan, 5 the Sikh and 1 being neutral.

Of the 272 Punjab newspapers 166 were published in Lahore and 31 in Amritsar. Other centres were Simla (13), Rawalpindi (11), Qadian (8), Ludhiana (6), Jullundur (5), Ferozepore, Gujranwala and Montgomery (3 each), Sialkot and the Native States of Patiala, Kapurthala and Maler Kotla (2 each), and 15 other localities (one each). The 3 North-West Frontier Province papers were all published in Peshawar.

Circulation.

427. It is impossible to obtain accurate statistics of the circulation of newspapers, and allowance must be made for the tendency of publishers to exaggerate the circulation of their organs. The average circulation of all papers was as far as can be ascertained about 308,000, as compared with 320,000 in 1913 and 280,000 in 1912. If an average of six months' publication be allowed for every paper which came into existence or ceased to exist during the year, the average circulation of each paper works out at about 1,450 copies. The following figures show the ascertained circulation of the more important publications:—

				Copies.
	English.			
**Bulletin* (Hindu)	...	...	...	3,246
**Tribune* (Hindu)	...	...	...	2,446
†*Panjabee* (Hindu)	...	...	...	1,801
‖*Khalsa Advocate* (Sikh)	...	...	...	850
‡*Observer* (Muhammadan)	...	...	...	800
	Vernacular.			
‖*Hindustan* (Hindu)	...	...	...	12,900
**Zamindar* (Muhammadan)	...	...	...	8,210
‖*Paisa Akhbar* (Muhammadan)			...	7,749
‖*Himata* (Hindu)	...	...	...	5,650
**Desh* (Hindu)	...	...	...	3,904
‖*Parkash* (Hindu)	...	...	...	3,445
‖*Khalsa Samachar* (Sikh)	...	...	...	3,270
‡*Vakil* (Muhammadan)	...	...	...	2,887
‖*Arya Gazette* (Hindu)	...	...	...	2,155
‖*Akhbar-i-Am* (Hindu)	...	...	...	2,000
‖*Rajput Gazette* (Hindu)	...	...	...	1,620
**Watan* (Muhammadan)	...	...	...	1,357
‖*Shahid* (Sikh)	...	...	...	1,000

NOTE.—* denotes daily. † denotes tri-weekly. ‡ denotes bi-weekly. ‖ denotes weekly.

The war was responsible for a large extension of newspaper circulation towards the end of the year.

Executive action.

428. The total number of declarations under sections 4 and 5 of Act XXV of 1867 filed during the year was 206. Security demanded under the provisions of Act I of 1910 ranged from Rs. 500 to Rs. 3,000. Demands of security resulted in the closing down of two existing presses and prevented the opening of 17 new ones. Three newspapers ceased publication and six failed to come into existence from the same cause.

The security of three presses, the *Zamindar* Press, Lahore, the Khalsa Press, Lyallpur, and the *Loyal Gazette* Press, Lahore, were forfeited during the year under report. Warnings were administered at the request of the Local Government to the publishers of 14 newspapers,—*viz.*, the *Kashmiri Magazine*, the *Sufi*, the *Afghan*, the *Observer*, the *Shauq*, the *Azzia*, the *Tribune*, the *Akhbar-i-Am*, the *Arya Patrika*, the *Parkash*, the *Prabhat*, the *Bir*, the *Panth Sewak* and the *Khalsa Akhbar*—in connection with articles open to objection on various grounds.

One paper, the *Panjabi Surma*, was warned for failure to comply with the provisions of section 3 of Act XXV of 1867.

429. Foreign affairs did not excite any great interest during the early part of the year. **Foreign affairs.**

From August to the end of the year the war formed almost the only subject of discussion in the press. It was at once resolved that all controversial subjects must be held in abeyance and England assured of the loyalty of India. This enthusiasm was still further accentuated by the decision to employ Indian troops in Europe. The general attitude of the press in its comments on the war may thus be said to have been on the whole satisfactory, though the tendency of certain newspapers to add to their circulation by the publication of sensational rumours necessitated the taking of action under the Press Act in several cases.

430. Colonial affairs did not occupy the attention of the press to the same extent as during the previous year. A section of the Sikh press attempted to stir up public interest in the unfortunate enterprise undertaken by Gurdit Singh in order to test the validity of the Canadian immigration laws, but the attempt met with no real success, and the outbreak of war finally put a stop to the whole discussion. **Colonial affairs**

431. A strong movement was set on foot during the year towards effecting a compromise between the two great communities, and the questions of *jhatka* meat and the slaughter of kine were largely ignored by the leading papers. The lesser newspapers of both parties at the same time made it fully evident that no compromise on these questions was possible. The publication of a book, the *Khalsa Panth ki Haqiqat*, led to a new controversy between the Aryas and the Sikhs on the question of *niyog*. Even the war failed to divert attention from the subject, and official warnings were found necessary in order to put a stop to the obscene writing to which the controversy had led. **Domestic affairs**

432. The Contempt Bill was the only piece of new legislation which came under severe criticism during the year under report. The outbreak of war put a stop to legislation of a controversial nature. The executive orders which then became necessary were on the whole well received as being unavoidable in a state of war, though it was claimed that the loyalty shown by all classes in India did away with any real necessity for them. **Legislation**

433. The strike among the students of the Lahore Medical College, though admitted to be regrettable from the point of view of discipline, gave rise to some criticism of the educational policy of Government. The Hindu University scheme and the question of official control were also widely discussed. **Education**

434. The Public Services Commission, the distribution of honours and the composition of the Secretary of State's Council also formed subjects of discussion in the press. **Miscellaneous.**

56.—Literary Societies.

(*Vide* pages 196-197 of the Administration Report for the year 1911-12.

57.—Arts and Sciences.

The Lahore Museum.

435. Although there was a slight decrease in the number of visitors to the Museum, the average attendance amounted to over 1,000 persons daily. Students continued to take advantage of the day reserved for them every week. The new gallery required to accommodate Sir Aurel Stein's collection of Central Asian antiquities was completed in the

course of the year, and a new library office and record room have also been added to the buildings. The work of cataloguing the exhibits at the Museum was continued. The catalogue of Indian Paintings was completed by Mr. S. N. Gupta, and progress was made with the catalogue of Buddhist sculptures, which has been undertaken by Mr. H. Hargreaves.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1915; also in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1914-15.

58.—Archæology.

HINDU AND BUDDHIST MONUMENTS.

436. In the year under review Rs. 8,122-6-4 were expended on Hindu and Buddhist Monuments in the Punjab, the greater portion on annual repairs, but special repairs were carried out at the Gauri Shankar Temples at Dasal and Nagar and at the Baijnath Temple, Baijnath, Kangra District. A *pucca* hut has been erected over the rock inscription at Pathyar and similar protection afforded for the two well-known inscriptions at Kanyara.

437. The most important new work was that undertaken at the rock-cut temple, Masrur, to which a reference was made in the last report. New quarters for the *pujari* have been erected clear of the site and excavation of a portion of the eastern face has been completed as well as part of the underpinning. The amount of *débris* to be removed has been greater than was anticipated, but the extent of the remains disclosed has been equally unexpected. The niches in the various shrines have been found still to contain images of Siva, Surya and Indra, while many fine architectural fragments and other detached images have also been recovered. Clearance on the north-east reveals very severe fracture of the rock and the most that can be done is to preserve the displaced masses in their present position, a work which may prove of some difficulty but one not likely to be beyond the resources of the Public Works Officers who are carrying out the work. Operations are still in progress but should be completed shortly.

438. Proposals for the conservation of the Manikyala Tope have been submitted and approved. The suggested conservation is not extensive and is confined to replacing certain missing portions of the berm and dome to ensure the preservation of the structure, and no attempt will be made to restore details as in 1891. The immediate surroundings of the monument will receive attention and provision has been made for the adequate drainage of the site.

439. An inspection of the Harappa mounds in the Montgomery District resulted in the acquisition of a small but interesting collection of ancient pottery, and certain objects containing several of the unidentified characters which form one of the special interests of this site.

MUHAMMADAN AND BRITISH MONUMENTS.

440. Rupees 50,895-9-11 were spent in the Punjab under this head in 1914-15, the buildings principally concerned being at Lahore. The road in front of Shalamar Gardens has been metalled and trees planted along the side, but only half the projected work was carried out during the year. A *kachcha* track has been made leading from the Lahore-Amritsar road to Ali Mardan Khan's tomb, Lahore, which seems likely to be enclosed shortly by the boundary wall of the North-Western Railway. The improved lay-out of the Hazuri Bagh, Lahore, with its new channels and fountains, has necessitated special arrangements for drainage and Rs. 1,150 have been expended on this work.

ARCHÆOLOGY.

441. At Jahangir's Tomb, Shahdara, Lahore, restoration has been carried out at a cost of Rs. 10,788. The special works included the repair of the enclosure wall and the restoration of the Baradari on the north side which has been treated on similar lines to its counterpart on the south, necessitating the removal of the modern additions, the relaying of the floors and the fitting of the back doorways with terra-cotta *jalis* to prevent ingress of cattle. Attention has also been paid to numerous historical buildings in the Lahore Fort, the works including the removal of the modern partitions and the restoration of the *jali* belustrade at the Shish Mahal, the replacing of the missing curved portion of the parapet of the Naulakha Burj, and the marble inlay-work on the southern face and certain repairs on the northern face of one of the *dalans*. Conservation of the Diwan-i-'Am has also been undertaken. The *dalans* of the Bari Khwabgah were recently reroofed with rolled steel beams and panelled jack arches. As it has been proposed to convert the Bari Khwabgah into an armoury to house the collections now exhibited in the *dalans* on the south of the Shish Mahal, the openings have been fitted with good teak doors of appropriate Mughal design. The subterranean rooms to the west of this monument have been cleared of earth to the original floor level. The Roman Catholic Chapel and the Bari Khwabgah have been enclosed by a barbed wire fence five feet high. This is intended as a temporary protection only and will be removed as soon as the Military authorities are able to evacuate the courtyard of Jahangir. In addition to special repairs already detailed Rs. 10,600 were expended on annual repairs to the numerous historical monuments of Lahore and on the water-supply at the Shalamar and Hazuri Bagh Gardens.

442. But little further progress has been made with the excavations at the Lat-ki-masjid, Hissar, but from the monument itself certain modern additions have been removed and some broken arches repaired. At Hansi the tomb of Ali Tajar, which was being imperilled by the subsidence of numerous graves in its immediate vicinity, has received attention as also the tomb of the Four Diwans. The conservation of the interesting tomb and mosque of Tahar Khan Nahar at Sitpur in the Muzaffargarh District has been taken in hand and the work is still in progress.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

(For this section reference should be made to pages 201—207 of the Report for 1911-12.)

60.—Ecclesiastical.

443. During the year improvements were made in the pay of the establishments attached to 15 cemeteries and in one case the cadre was increased. The cost of these measures to Government amounts to Rs. 1,764 per annum. The Government of India made a grant of Rs. 554 to provide a proper water-supply for the cemetery at Sirsa and another of Rs. 17,319 for the construction of a residence for the Anglican Chaplain at Ferozepore. The Local Government sanctioned grants of Rs. 55 and Rs. 350, respectively, for repairs to tombs in the cemeteries at Gujranwala and Wazirabad, and for providing louvred shutters to the windows of the Church at Karnal.

61.—Stationery.

444. The value of stationery issued by the Stationery Department at Calcutta to offices in the Punjab, during 1914-15, was Rs. 1,12,526, and to Presses Rs. 1,48,584, making a total of Rs. 2,61,110, against Rs. 2,06,128 for the preceding year. The value of supplies to offices was less than the allotment by Rs. 19,311 and that to Presses exceeded the allotment by Rs. 10,335, the net result being a saving of Rs. 8,976 or a little over 3 per cent. in the aggregate.

62.—Punjab Government Press.

445. The new Press building to the south of the Civil Secretariat has been completed and occupied. It is a great improvement on the old Press. A separate grant for the purchase of new type, printing and binding machinery was sanctioned during the year under review and the materials and plant supplied.

446. The following statement compares the income and expenditure with the value of the work turned out during the years 1913-14 and 1914-15 :—

Year.	Income.	Expenditure.	Value of outturn.
	Rs.	Rs.	Rs.
1913-14 ...	25,236	2,26,313	1,72,780
1914-15 ...	24,207	2,70,267	1,81,472

The income of the Press has decreased by over 4 per cent., while the expenditure, chiefly on account of new machinery, &c., increased by more than 19 per cent. and the value of the outturn by more than 5 per cent.

447. Printing for departments and offices executed during the year by contractors amounted to Rs. 38,450 as against Rs. 49,149 in the previous year.

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